

Report of the Governor's Task Force to Conquer Cancer in Maryland

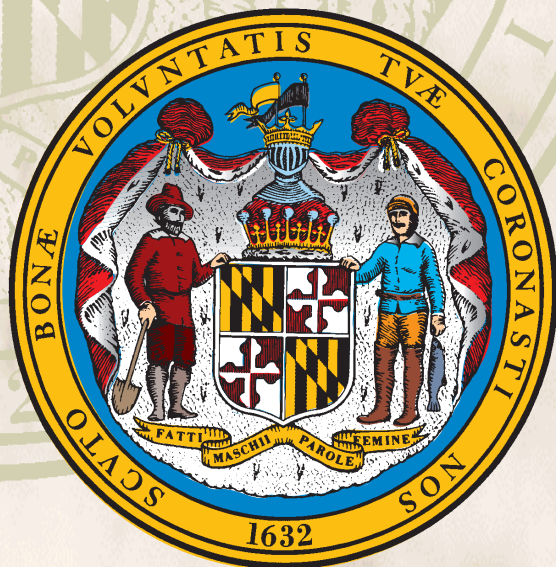
Parris N. Glendening, Governor

Kathleen Kennedy Townsend, Lt. Governor

Donna L. Jacobs, Esquire, Chair

Georges C. Benjamin, M.D., Vice Chair

December 9, 1999



Acknowledgments

The Governor's Task Force to Conquer Cancer in Maryland would like to acknowledge the many individuals who played an important role in producing this report. First, the Task Force is grateful to Governor Parris N. Glendening for his insight and vision and for giving us the opportunity to work on this important issue. We also extend our thanks to the members of the Maryland Legislature who graciously gave their time to serve with us on this project. In addition, there are a number of people without whom, the Task Force would not have been able to complete its charge.

The Task Force would like to thank the staff from the Department of Health and Mental Hygiene. Marsha Bienia, Chief of the Division of Cancer Control played an invaluable role, not only organizing all of the task force meetings but serving as a key contributor to the final report. Lynn Khoo, Ph.D., Director of the Maryland Cancer Registry and Acting Executive Director of the State Council on Cancer Control and Carlessia Hussein, Ph.D., Director of the Community and Public Health Administration provided tremendous guidance, technical advice and support. Virginia Thomas and Katie Martin from the University of Maryland, Baltimore County's Center for Health Development and Management organized and staffed the public hearings, compiled the minutes of the public hearings, tabulated and analyzed citizen input and coordinated the public dissemination of information through the Task Force's web site.

Special thanks are extended to the state and national experts who testified before the Task Force. These experts provided tailored information about cancer trends and treatments in Maryland and the nation.

Finally, the citizens of Maryland who attended the public hearings deserve to be recognized as well. Without their input, the Task Force would not have been able to craft recommendations that truly touch and affect the people with the most needs. Over 300 Maryland citizens attended the public hearings and provided invaluable insight to the personal toll that cancer takes on individuals and families in Maryland.

Contents

	<i>Page</i>
I. Executive Summary	3
II. Introduction	9
III. Status of Cancer in Maryland	10
A. Identification of the Problem.....	10
B. Existing Cancer Resources.....	17
C. Existing Cancer Programs, DHMH.....	17
1. Division of Cancer Control	17
2. Behavioral Risk Factor Surveillance Survey (BRFSSS).....	18
3. Office of Environmental Coordination.....	18
4. Health Statistics Administration.....	18
5. Maryland Office of Planning.....	18
6. Maryland Office of Health Promotion, Education and Tobacco Use Prevention...	19
7. State Council on Cancer Control.....	19
8. Maryland Cancer Registry (MCR).....	20
IV. Legislative Action	21
V. Governor's Task Force to Conquer Cancer	22
VI. Summary Proposals of the University of Maryland Medical System and The Johns Hopkins University	28
VII. Task Force Recommendations	30
A. Guiding Principles.....	30
B. Goals and Objectives.....	32
1. Prevention/Early Detection.....	36
2. Education.....	37
3. Treatment/Supportive Care.....	38
4. Research.....	38
5. Surveillance and Evaluation.....	38
6. Administration.....	39
7. Implementation Mechanism.....	40
C. Summary.....	40
VIII. Conclusion	41

Continued

Appendix 1: National Tobacco Settlement.....	43
Appendix 2: Task Force to Conquer Cancer Membership.....	45
Appendix 3: Major Activities of the Division of Cancer Control.....	46
Appendix 4: Standing Committees of the Maryland State Council on Cancer Control.....	50
Appendix 5: Maryland Cancer Registry Data.....	51
Appendix 6: Executive Order.....	53
Appendix 7: Proposal from The University of Maryland Medical System.....	56
Appendix 8: Proposal from The Johns Hopkins University.....	63
Appendix 9: Letter from The University of Maryland Medical System and The Johns Hopkins University.....	70
Appendix 10: Funding Charts	71

I. Executive Summary

Background

The State of Maryland is a signatory party to the master settlement agreement reached in a multi-state litigation against the tobacco industry. Over the next 25 years, it is anticipated that Maryland will receive an estimated \$4 billion as a result of this settlement.

In response to the tobacco litigation settlement, the Maryland General Assembly established a Cigarette Restitution Fund to provide for the distribution of funds from the settlement (Chapter 173). Under this legislation, at least 50 percent of funds must be allocated to: reduce the use of tobacco products by minors and smoking cessation programs; tobacco crop conversion programs; public and school education campaigns to decrease tobacco use; enforcement of tobacco sales laws; support of the Maryland Health Care Foundation; primary rural health care; prevention, treatment, and research concerning cancer, heart disease, and lung disease; and substance abuse prevention and treatment programs.

On June 3, 1999, Governor Glendening announced a 10 year vision for the use of the tobacco settlement funds and appointed three task forces, including the Task Force to Conquer Cancer in Maryland. The task forces were charged with developing recommendations in accordance with the Governor's ten year vision and presenting a report to the Governor.

The charge of the Task Force to Conquer Cancer in Maryland is to determine how best to combat cancer in Maryland, and to make recommendations on how to allocate \$50M from the tobacco settlement fund for each of ten years for cancer prevention, education, treatment, and research, and improve access to, and quality of, cancer care for minorities and persons living in rural and underserved areas of the State. Governor Glendening dedicated \$10M per year (from these anti-cancer funds) to the University of Maryland Medical System and The Johns Hopkins University, each. The Task Force was asked to consider specific proposals from each institution to determine whether total appropriations of \$15M per year would be appropriate.

The Task Force met six times between August 12, 1999 and October 27, 1999 and held seven public hearings across the State to get input from the community. Ten broad themes arose at the public hearings: education, access to care, research, treatment of specific cancers, screening/prevention, outreach, diagnosis and treatment, targeting special populations, support services, and surveillance.

Recommendations

After substantial public testimony, extensive discussion and presentations from many cancer experts, the Task Force developed a series of ten year goals, objectives, and recommendations in four areas: prevention/early detection, education, treatment/supportive care, and research. The Task Force also agreed that the University of Maryland Medical System and The Johns Hopkins University presented ample evidence in their specific proposals to warrant annual funding of \$15M, each.

In developing its recommendations, the Task Force established several **guiding principles** to determine how the remaining unallocated funds will be awarded. Recipients must:

- Utilize funds in a way that maximizes effectiveness and will yield the greatest impact on cancer mortality by focusing on the most common cancers and those where early intervention has the greatest positive result;
- Utilize funds in a way that will expand existing services and leverage additional resources to address the problem;
- Focus on the most common cancers and cancers where early intervention has the greatest potential for a reduction in cancer mortality;
- Strike a balance between new research and application of interventions that are already known to reduce cancer mortality;
- Focus on reducing disparities in cancer mortality, survival, and quality of life among minorities and persons living in rural and underserved areas of the State;
- Implement programs at the grass roots, community level;
- Ensure appropriate evaluation and accountability for cancer funds; and
- Focus cancer education, prevention, research and treatment on school age children.

Goals

The recommendations of the Task Force are made in four key areas: education, prevention, research, treatment/supportive care, and, in the areas of surveillance/evaluation and administration. The overall goals of the Task Force are as follows:

- To reduce Maryland's cancer mortality rate from the upper quartile of states to the lowest quartile of states.
- To reduce the burden of cancer in Maryland by decreasing cancer incidence and mortality and by improving survival and quality of life.
- To eliminate the disparity in cancer deaths and survival between minorities and whites.
- To increase access to cancer care for rural and medically underserved communities.
- To expand existing services, where appropriate.

GOALS: KEY AREAS

- Education
- Prevention
- Research
- Treatment/ Supportive Care
- Surveillance/Evaluation
- Administration

GOALS:

- Reduce mortality
- Reduce burden
- Eliminate disparities
- Increase access
- Expand services
- Leverage resources

- To leverage additional resources to address the problem of cancer by fostering partnerships, collaboration and coordination.

The Task Force established 10 year overall objectives and specific objectives within each of the four key areas. Many of these objectives are modeled after the "U.S. Healthy People 2010 draft objectives":

Overall Objectives

- To reduce cancer deaths to a rate of no more than 103 per 100,000 people.
- To reduce the disparity in cancer deaths between ethnic minorities and whites to a rate of 1.00.
- Of the \$20M remaining, after the allocations to the University of Maryland Medical System and The Johns Hopkins University, to spend 25 percent or \$5M dollars for prevention/early detection; 20 percent or \$4M dollars for education; 20 percent or \$4M dollars for treatment/supportive care, 20 percent or \$4M dollars for research; 10 percent or \$2M dollars for surveillance; and 5 percent or \$1M dollars for administration.

Key Recommendations and Specific Objectives

Prevention/Early Detection (\$5 Million)

The primary focus of these activities should be early detection of colorectal, breast, prostate, cervical, oral, and skin cancer and risk factor reduction such as diet and tobacco use.

Objectives

- To increase to 75 percent the proportion of people of all ages who limit exposure to the sun, use sunscreens and protective clothing when exposed to sunlight, and avoid artificial sources of ultraviolet light (e.g., sun lamps, tanning booths).
- Increase to at least 75 percent the proportion of people aged 2 and older who meet the Dietary Guidelines' minimum average daily goal of at least five servings to vegetables and fruit.
- Increase to at least 80 percent the proportion of people aged 2 and older who meet the Dietary Guidelines' minimum average daily goal of at least six servings of grain products.
- Increase to at least 75 percent the proportion of people aged 2 and older who meet the Dietary



Guidelines' minimum average daily goal of no more than 30 percent of calories from fat and less than 10 percent of calories from saturated fat.

- Increase to at least the following percentages the proportion of Marylanders who get screened for various cancers:

Colorectal cancer: 75 percent of people aged 50 and older who have received a colorectal screening examination (fecal occult blood stool test within the preceding 1 to 2 years) and 50 percent of those who have ever received proctosigmoidoscopy.

Breast cancer: 85 percent of women aged 40 and older who have received a breast examination and a mammogram within the preceding 2 years.

Cervical Cancer: 95 percent of women aged 18 and older who have ever received a Pap test and to at least 85 percent those who have received a Pap test within the preceding 3 years.

Oropharyngeal cancer: 80 percent of people aged 40 and older who have received an oral cancer examination in the preceding year.

Skin cancer: 50 percent of people aged 50 and older who have received a skin cancer examination in the preceding year.

Prostate cancer: 80 percent of men aged 50 and older who have ever received a prostate a PSA test and to 60 percent those who have received a PSA within the preceding year.

Prostate cancer: 80 percent of men aged 50 and older have ever received a digital rectal exam and to 60 percent of those who received a digital rectal exam within the preceding 1-2 years.

Education (\$4 Million)

Education activities should focus on both education of the public, including youth, and education of health care providers. Education of the public should be community based and targeted to reach specific audiences. Education efforts should focus on the need for screening, self examinations and healthy lifestyles including providing information on the importance of, and examples of good nutrition, appropriate physical activity, and avoiding exposure to the sun. Education of health professionals should focus on assuring that the current standards of care are provided, participating or referring patients to clinical trials and providing or referring patients to resources for support.

Objectives

- To assure that 60 percent of the funds that are allocated for public education are received by community based groups to provide education and outreach in a culturally sensitive manner to ethnic minorities and underserved communities.
- To increase to at least 85 percent the proportion of primary care providers who routinely counsel patients about tobacco use cessation, diet modification, and cancer screening recommendations.

Treatment/Supportive Care (\$4 Million)

The Task Force to Conquer Cancer in Maryland is concerned about the crisis in health care in Maryland in terms of lack of access to care and inadequate quality of care. The Task Force recommends that treatment focus on the major causes of cancer deaths and that funds be used to assure diagnosis and treatment for persons screened under the funds available through the Task Force to Conquer Cancer recommendations. Some of the treatment/supportive care funds should be specifically allocated for case management, transportation, supportive services such as cancer support groups, and hospice care.

Objectives

- To increase the percent of colorectal, breast, prostate, oral cavity and pharynx, skin and cervical cancers that are detected at an early stage.
- To increase the proportion of cancer patients who participate in clinical trials.
- To provide coverage for diagnosis and treatment for people screened for cancer under the funds allocated from the recommendations of the Task Force.
- To provide 20 percent of the funds set aside for "Treatment/Supportive Care" funding for cancer support services such as transportation, case management, cancer support groups and hospice care.

Research (\$4 Million)

Research funding should increase accrual to clinical trials, investigate ways to prevent cancer, enhance behavioral research, demonstrate how to communicate new research findings to the public, and support research on environmental carcinogens.

Objectives

- To provide funds to research ways to prevent cancer and research new and early screening and diagnosis methods.
- To provide funds to research environmental carcinogens, their location in Maryland and ways to decrease exposure to environmental and occupational carcinogens.

Surveillance and Evaluation

Existing surveillance systems should be enhanced by adding geographic mapping capabilities, integrating related data bases, increasing analyses and, developing information technology to provide more timely access to information. Evaluation efforts should measure achievement of short term, intermediate, and long term outcome and process objectives. Internal process and outcome evaluations must be conducted for individual programs to gauge the progress of grants and contracts. External process and outcome evaluations should focus on the impact of interventions on special populations on a statewide basis. It is recommended that the Department of Health and Mental Hygiene be given responsibility for managing surveillance and evaluation at the state level.

Administration

An effective statewide cancer control program will need a strong management structure to provide oversight and coordination of the wide range of programs and partnerships throughout the State. The Task Force recommends that the Department of Health and Mental Hygiene be given the lead responsibility for the administration and management of the programs which are awarded funds to conquer cancer. The Department of Health and Mental Hygiene currently houses the State Council on Cancer Control, the Maryland Cancer Registry, and the Division of Cancer Control. The Department of Health and Mental Hygiene should combine these cancer units into one unit for better efficiency, coordination and collaboration. To the extent possible, there should be coordination of surveillance and evaluation activities of the State's anti-cancer and anti-smoking activities.

Implementation Mechanism

Requests for Proposals and grants be used as the methods of disseminating these funds, with approximately 50 percent given out as grants and 50 percent as contracts. Both grants and contracts should be distributed based on the guiding principles, goals and objectives included in the report of the Task Force to Conquer Cancer.

Conclusion

Governor Glendening's proposal to include \$50 million in the state budget for each of the next ten (10) years to combat cancer is laudable and shows great vision. This Task Force has attempted to design a comprehensive, statewide cancer plan that will change the course of cancer in Maryland. The ultimate goal is to dramatically reduce the incidence, mortality and morbidity rates of this ravaging disease on Maryland citizens and their families.

In order to maximize the efficacy of these cancer funds, efforts should be focused where the greatest impacts on cancer can be realized. Accordingly, efforts must be focused on the most common cancers in Maryland and those where early intervention has the greatest beneficial results. Additionally, the tobacco settlement funds should not be used to supplant existing programs but rather to supplement existing, effective programs, where appropriate.

Cancer claims too many lives. Many cancer deaths can be prevented and many cancers can, and must, be detected earlier, thereby improving the chances of a cure. Recent advances in treatment and pain management can improve one's quality of life. Maryland citizens deserve access to those benefits.

The recommendations of the Task Force are designed to make these improvements in cancer care available. In order to make these goals a reality, a comprehensive and collaborative effort involving the public, health care professionals, the research community, the public health community, and policy makers is needed. These recommendations provide a framework to win the battle against cancer in the 21st century.

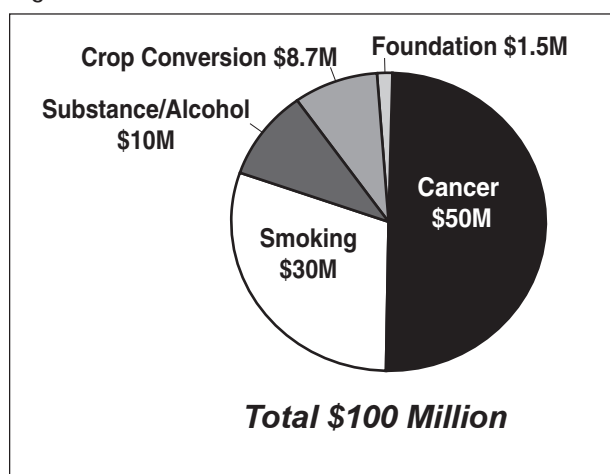
II. Introduction

The State of Maryland is a signatory party to the master settlement agreement reached in the multi-state litigation against the tobacco industry to recover Medicaid costs associated with the treatment of smoking-related illness. Over the next 25 years, Maryland is scheduled to receive an estimated \$4 billion as a result of this settlement.¹

On June 3, 1999, Governor Glendening announced a ten (10) year vision focused on making substantial advances in this State in education, health and tobacco crop conversion. Governor Glendening's health and agriculture plans are designed to make Maryland the leading anti-cancer state in the nation. The Governor's ten (10) year health and agriculture program devotes:

- \$50 million annually to combat cancer, including funding up to \$15 million per year each to the University of Maryland, Baltimore and The Johns Hopkins University;²
- \$30 million annually to combat smoking;
- \$10 million annually to combat substance and alcohol abuse;
- \$87 million over 10 years for tobacco crop conversion; and
- \$1.5 million per year to the Maryland Health Care Foundation.

Figure 1. Ten Year Vision



In addition to specifically designating these funds over ten (10) years, Governor Glendening established three task forces by Executive Order No. 01.01.1999.19 to make recommendations on the best uses of these funds. The Task Forces are: The Task Force to End Smoking in Maryland, the Task Force to Conquer Cancer in Maryland and Tobacco Conversion in Maryland. Each task force was directed to present a report to the Governor by October 31, 1999. The following is the report of the Task Force to Conquer Cancer in Maryland. A list of the members of the Task Force is attached as Appendix 2.

¹ It is important to note that these funds are not guaranteed and may potentially be offset or substantially reduced by a number of factors or triggers. See Appendix 1.

² The Governor specifically allocated \$10M per year for each of 10 years to the University of Maryland Medical System and the same to the Johns Hopkins University. He asked the Task Force to review plans submitted by these institutions and determine whether additional funding of \$15M is warranted for each institution.

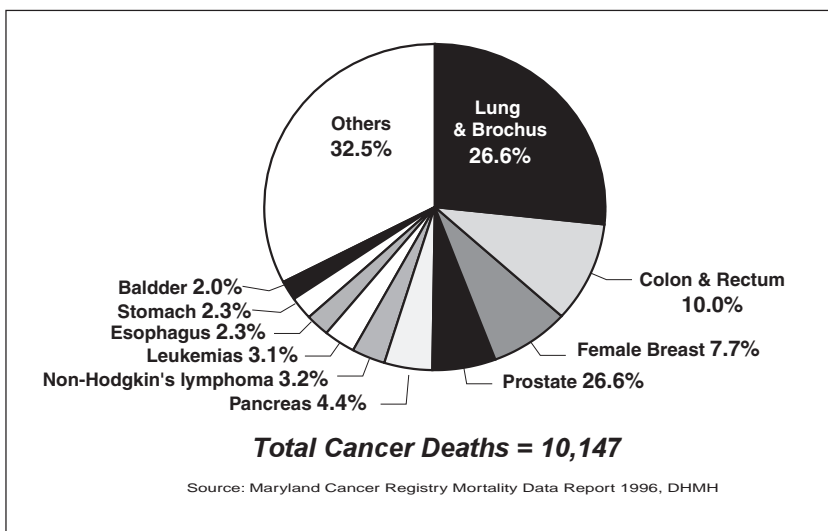
III. Status of Cancer in Maryland

A. Identification of the Problem

**10,000+ DIE OF CANCER
EACH YEAR IN MARYLAND**

Cancer is the second leading cause of death in Maryland, exceeded only by heart disease.³ One of every five deaths in Maryland is due to cancer. Each year approximately 24,000 Marylanders are diagnosed with cancer and more than 10,000 Marylanders die of cancer. The seven most commonly diagnosed cancers in Maryland are cancers of the lung and bronchus; breast; prostate; colon and rectum; bladder; melanoma of skin; and oral cavity and pharynx. These cancers constitute over 68 percent of new cancer cases. Fifty-four percent of cancer deaths are due to cancer of the lung and bronchus, colon and rectum, breast and prostate. Maryland's cancer incidence and mortality rates are consistently higher than national rates. Maryland currently ranks 7th in the nation in cancer mortality: 14th for men and 6th for women.⁴

Figure 2. Percent of Maryland Cancer Mortality by Type of Cancer, 1996
Total Cancer Deaths = 10,147



**Cancer Incidence
and Mortality ↑
HIGHER
IN MALES AND
NON-WHITES**

Overall cancer incidence and mortality rates are higher for males than females and for non-whites than whites. The cancer incidence rate for Maryland men was 1.4 times the rate for Maryland women, and the mortality rate for men is 1.5 times that of women. For African Americans in Maryland the cancer incidence rates and the mortality rate for all cancers, respectively, are 1.1 and 1.3 times that of whites. The higher mortality rate among African-Americans compared to the ratio of incidence rates between the races suggests variations in the application of state-of-the art treatment among the racial/ethnic groups.

Between 1992 and 1996, Maryland cancer incidence rates declined 2.1% and the mortality rates declined 1.0%. Most of the decline can be attributed to decreases in incidence and mortality from cancers of the

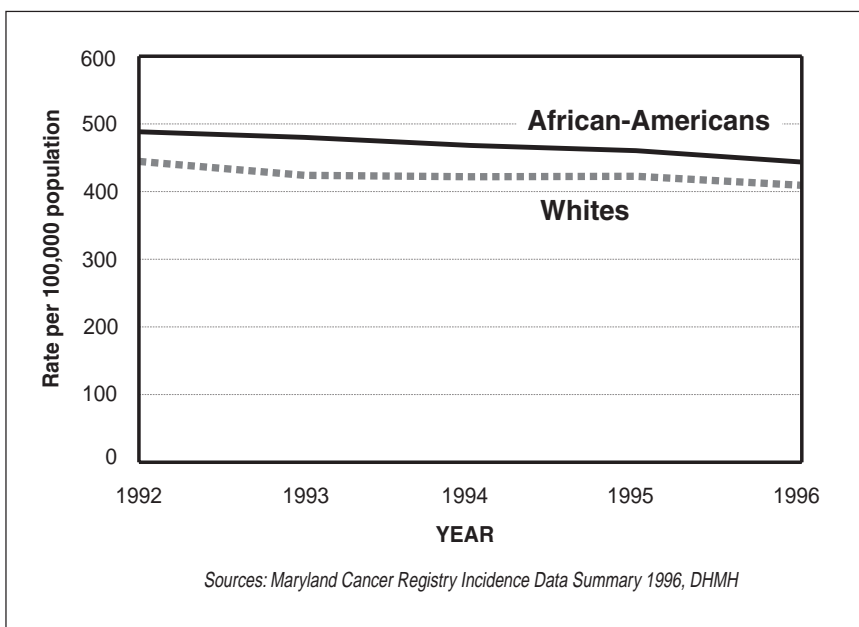
³ "Cancer Facts and Figures, 1999" American Cancer Society.

⁴ Ries LAG, Kosary CL, Hankey BF, Miller BA, Edwards BK (eds.). SEER Cancer Statistics Review 1987-1996, NCI, NIH, Bethesda, MD, 1999.

lung, colon and rectum, and prostate in men; and breast, colon and rectum, and cervical and ovarian cancers in women.

Cancer incidence rates decreased among both whites and non-whites in Maryland between from 1992 to 1996. Cancer incidence in whites declined 0.9 percent annually, and in African Americans it has declined 1.9⁵ percent annually, from 1992 to 1996. Cancer mortality rates among whites declined 0.9% annually, while the mortality rates for African-Americans increased 0.6 percent annually during the same time period. The declines in cancer incidence were greater in men than in women and greater in young people than in older people.

Figure 3. Maryland Age-Adjusted Cancer Incidence by Race, 1992-1996



**TOBACCO IS
A RISK FACTOR**

Tobacco is a risk factor in the development of cancers of the lung and bronchus, oral cavity and pharynx, larynx, esophagus, bladder, kidney, pancreas and cervix.⁶ These cancers constituted 46 percent of new cancer cases and 41.5 percent of cancer deaths in 1996. Additionally, 35 percent of new cancer cases and 23.5 percent of cancer deaths may be due to dietary factors.⁷ Suspected diet-related cancers include: stomach,⁸ lung, oral cavity, pancreas,⁹ colon,¹⁰ rectum,¹¹ pharynx, larynx, bladder, cervix and esophagus,¹² breast,¹³ prostate,¹⁴ ovary and endometrium.¹⁵

⁵ "Maryland Cancer Incidence Summary Report 1996", Maryland Cancer Registry, Community and Public Health Administration, Maryland Department of Health and Mental Hygiene. Last Updated June 16, 1999.

⁶ Novotny TE, Giovino GA. "Tobacco Use." *Chronic Disease Epidemiology and Control*, 2nd Edition. APHA. 1998; 117-148.

⁷ Kushi LH, Foerster SB. "Diet and Nutrition." *Chronic Disease Epidemiology and Control*. APHA. 1998; (8) 215-259.

⁸ Kono S, Hirohata T. "Nutrition and Stomach Cancer." *Cancer Causes and Control*. 1996;7 (1): 41-55.

⁹ Howe GR, Burch JD. "Nutrition and Stomach Cancer." *Cancer Causes and Control*. 1996;7 (1): 69-82.

¹⁰ Thun MJ, Calle EE, Namboodiri MM, *et al.* "Risk Factors for Fatal Colon Cancer in a Large Prospective Study." *J. National Cancer Institute*. 1992;84 (19): 1491-1500.

¹¹ Potter JD. "Nutrition and Colorectal Cancer." *Cancer Causes Control*. 1996;7 (1): 127-146.

¹² Cheng KK, Day NE. "Nutrition and Esophageal Cancer." *Cancer Causes Control*. 1996;7 (1): 127-146.

¹³ Hirayama T. "Epidemiology of Breast Cancer with Special Reference to the Role of Diet." *Prev Med*. 1978;7: 173-195.

¹⁴ Kolonel LN. "Nutrition and Prostate Cancer." *Cancer Causes Control*. 1996;7 (1) 83-94.

¹⁵ Hill HA, Austin H. "Nutrition and Endometrial Cancer". *Cancer Causes Control*. 1996;7 (1): 19-32.

Methods of cancer detection in recent years have improved, affecting both the clinical characteristics of the disease at presentation and the manner in which it is treated. The burden, however, of cancer varies markedly among racial/ethnic groups. Moreover, African Americans are likely to be diagnosed at a more advanced stage of disease, and the resultant survival rate is poorer than for white counterparts. The differences in incidence and mortality rates among racial/ethnic groups are not yet fully understood, but studies suggest that financial barriers to early detection,¹⁶ cancer screening,¹⁷ and culturally based attitudes and beliefs contribute to these disparities.¹⁸

**AFRICAN-AMERICANS
DIAGNOSED LATE AND
SURVIVAL RATE LOWER**

**SURVIVAL
RATE 58%**

It is estimated that approximately 80,000 Marylanders alive today have a history of cancer. Some of these individuals can be considered cured, while others still have evidence of cancer. More and more cancer patients are surviving after having treatment for cancer. About 9,050 Marylanders, or 4 of 10 patients who get cancer in 1999, will be alive five years after the diagnosis. The five-year survival rate,¹⁹ which is commonly used to monitor progress in early detection and treatment of cancer, is 58% overall.

Most of the cancers when detected and treated at earlier stages, result in better survival rates. The screening-accessible cancers, such as cancers of the breast, colon, rectum, cervix, prostate, oral cavity and skin, account for approximately half of all new cancer cases each year. If all these cancers were diagnosed at the earlier stages, the five-year survival of these cancers which is 60 percent could increase to more than 75 percent.²⁰

The National Cancer Institute estimates an overall annual cost for cancer at \$107 billion, \$37 billion for direct medical costs, \$11 billion for morbidity costs, and \$59 billion for mortality costs. Treatment of breast, lung and prostate cancers account for more than half of the direct medical costs.

**LIFESTYLE
IS A
FACTOR**

Cancer is caused by both external (especially life style factors such as smoking and diet) and environmental (hormones, immune conditions, and inherited mutations) factors.²¹ Causal factors may act together or in sequence to initiate or promote carcinogenesis. It often takes ten or more years to develop a detectable cancer after exposure or mutation. The risk of developing cancer also varies based on trait (race, genetics²²) and exposure (sunlight, cigarette smoking, heavy alcohol uses²³).

¹⁶ Mandelblatt J, Andrews H, Kao R, *et al.* 1996. "The Late Stage Diagnosis of Colorectal Cancer: Demographic and Socioeconomic Factors." *Am J Publ Health* 86; 1794-1797.

¹⁷ Potosky AL, Breen N, Graubard BI, Parsons PE. 1998. "The Association Between Health Care Interview Survey." *Medical Care* 36: 257-270.

¹⁸ Lannin Dr, Matthews HF, Mitchell J, *et al.* 1998 "Influence of Socioeconomic and Cultural Factors on Racial Differences in Late-Stage Presentation of Breast Cancer." *JAMA*. 279: 1801-1807.

¹⁹ SEER Cancer Statistics Review 1987-1996, NCI 1999.

²⁰ Wingo PA, Landis S, Parker S, Health CW. "Using Cancer Registry and Vital Statistics Data to Estimate the Number of New Cancer Cases and Deaths in the United States for the Upcoming Year." *J Registry Management* 1998: 43-51.

²¹ *Cancer Rates and Risks*, 4th Edition, NCI 1998.

²² Morrison A, "Sequential Pathogenic Components of Rates." *Am J Epidemiol*. Vol. 109, 149: 709-718

²³ Osteen RT, Steel GD, Menck HR, Winchester DP. "Regional Differences in the Management of Breast Cancer," *CS Cancer J Clin* 1992; 42: 39-43.

²⁴ Shopland DR, "Cigarette Smoking as a Cause of Lung Cancer." *Cancer Risks and Rates*. NIH. NCI 1996; 67-72.

Cigarette smoking alone causes 31 percent of total cancer deaths each year²⁴. 23 percent of all cancer deaths in females and 42 percent in males. Other tobacco products such as smokeless tobacco, pipes, cigars and chewing tobacco also substantially elevate risks for cancer.

The Maryland Adolescent Survey reported that 43 percent of Maryland 8th graders smoke at least one half pack per day. When compared to national counterparts, Maryland's youth smoking prevalence is greater for students in the 8th and 10th grades and roughly the same for 12th graders.

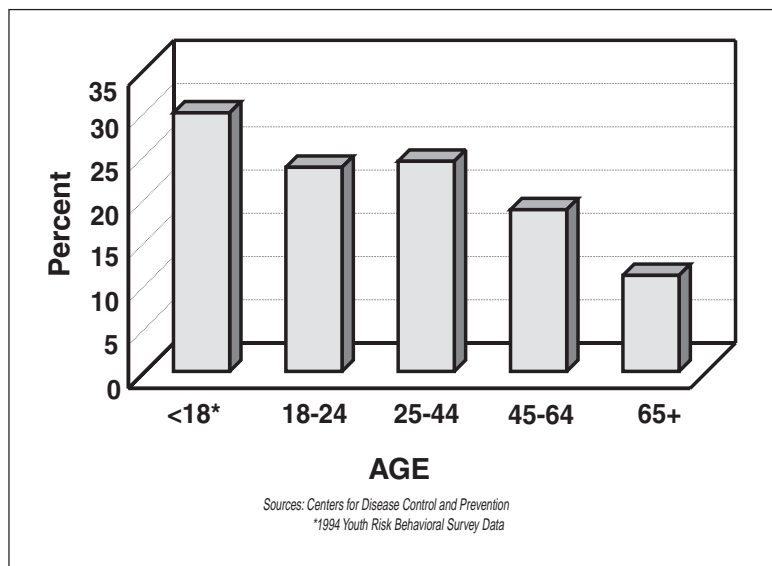
Nonetheless, age is the most common known risk factor for cancer. The risk of developing cancer increases as Marylanders grow older. An additional 22 percent of cancers were either diet and/or alcohol related. Most cancers caused by tobacco use, heavy alcohol use, diet and exposure to sun can be prevented completely.

**RANK: 17th in LUNG and
BRONCHUS CANCER
MORTALITY**

Lung Cancer

Maryland ranks 17th in lung and bronchus cancer mortality rates among the states and the District of Columbia: 19th in lung and bronchus cancer mortality for men, and 9th for women. There was an annual decrease of 0.2 percent in mortality rates from 1992 to 1996: 0.6 percent among Maryland men, and an

Figure 5. Percent Current Smokers in Maryland by Age, 1997



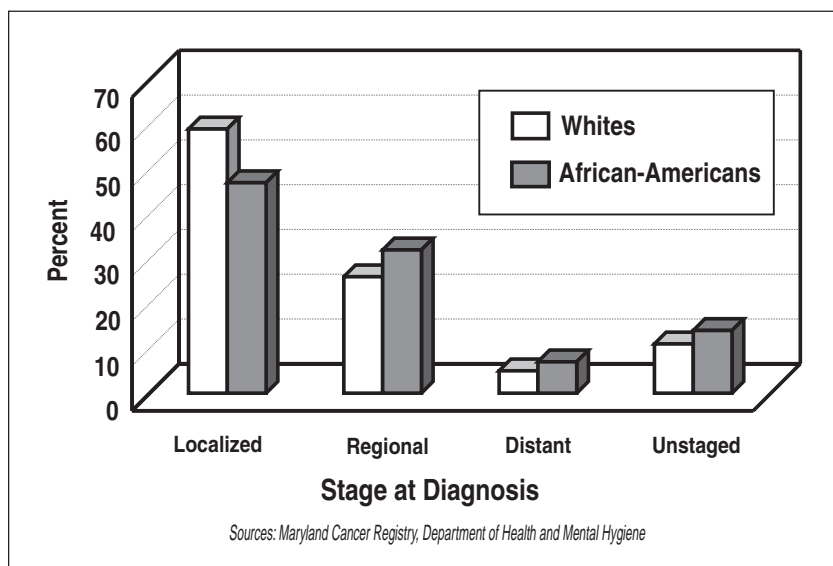
annual increase of 0.4 percent among Maryland women. The lung and bronchus cancer incidence rate has declined 2.0 percent annually: 3.6 percent among men and 0.3 percent among women. Smoking among men peaked in 1955. Smoking among males dropped from 60 percent to less than 45 percent in the 1960s, and this trend continued over the next two decades. As a result of this temporal smoking pattern and the lag time to reflect the effect of carcinogens, lung cancer mortality peaked in the early 1990s. The increase in smoking among females occurred later in the 1960s. Female lung cancer mortality followed a similar trend. Therefore, the mortality from lung cancer among females continued to rise in the current decade. As females begin to quit smoking, the lung cancer mortality rate seems to be leveling off ²⁵. The decrease in lung cancer mortality among men indicates the potential success of tobacco control programs.

Breast Cancer

Maryland ranks 10th in female breast cancer mortality among all states and the District of Columbia. The breast cancer mortality rates among Maryland women showed an annual decrease of 3.1% from 1992 to 1996. There was a decrease in breast cancer mortality rates of 0.6% for white women and 1.4% for African-American women annually during the same period. The breast cancer incidence rates among Maryland women increased 0.6%. There was an increase in the incidence rates of 1.0% among white women. The incidence rate change in African American women was insignificant. The proportion of Maryland women diagnosed at the early stages of disease has increased since 1992. This increase along with the advances in diagnosis and treatment of breast cancer may play a significant role in the decreases in mortality rates. Although both races showed increasing percentages of breast cancer diagnosed at early stages, the finding that 47 percent of African-American women had their breast cancers diagnosed at later stages than white women in Maryland suggests a significant screening gap.

**RANK: 10th in BREAST
CANCER MORTALITY**

Figure 6. Female Breast Cancer Stage at Diagnosis by Race, 1992-1996



²⁵ Cancer Information Service, National Cancer Institute, NCI Online, CancerNet-R, href="/cancerweb.html".

Prostate Cancer

Maryland ranks 8th in prostate cancer mortality among all states and the District of Columbia. Prostate cancer mortality rates for African American men is significantly higher than whites: 1.8 to 1.0. There was an annual decrease of 3.1 percent in prostate cancer mortality rates; a decrease of 3.3 percent among white men and an increase of 2.6% among African American men from 1992 to 1996. The prostate cancer incidence rates in Maryland decreased 6.4 percent annually from 1992 to 1996. The incidence rates for prostate cancer decreased 8.9 percent among white men and 3.1 percent among African American men. Increased use of prostate specific

**RANK: 8th in PROSTATE
CANCER MORTALITY**

antigen testing and digital rectal examinations is believed to be responsible for the increase in incidence rates among white men in the early 1990s²⁶. This temporal trend has now reached the African-American population which causes an increase in prostate cancer incidence rates among African-American men, while the incidence rates among whites have stabilized.

Colorectal Cancer

Maryland ranks 3rd in colon and rectum cancer mortality in the nation. Maryland men rank 4th in colon and rectum cancer mortality and women rank 6th. Colon and rectum cancer

mortality rates have decreased 1.5 percent annually in Maryland from 1992 to 1996. There was an annual decrease in mortality rates of 0.2 percent among men and

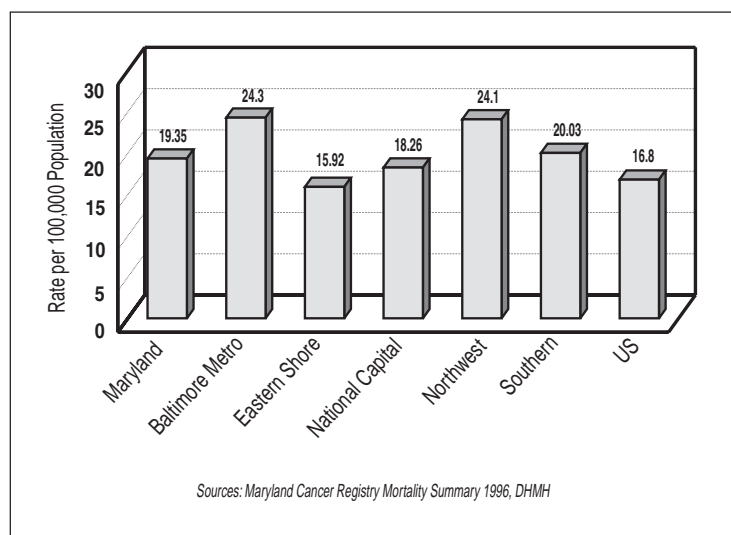
2.0 percent among women. Mortality rates declined 1.1 percent in

whites but increased in African Americans

by 3.3 percent from 1992-1996. During the same period, the incidence rates for colon and rectum cancer also have decreased 1.6 percent: a decrease of 2.3 percent among men and 1.0 percent among women. Colon and rectum cancer is the 4th most common cancer and the 2nd most common cause of cancer death²⁷.

**RANK: 17th in COLON and
RECTUM CANCER
MORTALITY**

Figure 7. Colon and Rectum Cancer Age-Adjusted Mortality Rates in Maryland by Region, 1996



²⁶ Mettlin C, Jones G, Averette H, Gusberg SB, Murphy GP. "Defining and Updating the American Cancer Society Guidelines for the Cancer-related Check-up: Prostate and Endometrial Cancers." *CA Cancer J Clin* 1993; 43: 42-46.

²⁷ Cancer Facts and Figures - 1995. American Cancer Society, 1993.

A personal or family history of colorectal cancer or polyps or inflammatory bowel disease have been associated with increased colorectal cancer risk. Other possible risk factors include a low fiber/high fat diet, inadequate intake of fruits, vegetables and grains and lack of physical activity.

Oral Cancer

**RANK: 7th in ORAL and
PHARYNGEAL CANCER
MORTALITY**

Maryland ranks 7th in oral and pharyngeal cancer mortality in the nation — 6th for males and 6th for females. Oral cancer incidence and mortality rates are higher in males than females, and higher in African Americans than whites. There was an annual decrease between 1992 and 1996 of 2.3 percent in oral cancer mortality rates — 3.3 percent decline among males; and 1.7 percent among females. There was a decline in incidence rates of 2.1 percent among males and 3.4 percent among females; and a 0.2 percent increase among whites and 0.7 percent increase among African Americans. The mortality rates also declined 2.0 percent annually: 2.5 percent among whites and 1.3 percent among African Americans. Oral and pharyngeal cancer is twice as common in African American males than white males²⁸.

Oral and pharyngeal cancers are largely preventable. Oral cancer deaths could be significantly reduced by eliminating smoking, smokeless tobacco and heavy alcohol use. The five year survival rate for oral and pharyngeal cancers which are detected at an early stage is 52 percent. Late stage diagnosis yields a very low rate of survival. Early detection and treatment offer excellent chances for cure and avoidance of costly medical bills and disfiguration. Tobacco (whether smoked, dipped or chewed²⁹), alcohol abuse and poor oral hygiene are known risk factors for oral cavity cancers.

Skin Cancer

**MOST COMMON
CANCER --
SKIN CANCER**

Skin cancer is the most common cancer but some types of skin cancer are not required to be reported. There are various types of skin cancer, including nonmelanoma skin cancers and melanoma of the skin. Nonmelanoma skin cancers are more common but are highly curable if detected early. Melanoma of skin is much less common but constitutes the vast majority of deaths due to skin cancer. Whereas overall cancer mortality and mortality from almost all other cancer sites decreased between 1992 to 1996, the mortality rates for melanoma of the skin increased 2.9 percent: 3.7 percent among men, and 6.9 percent among women. During the same time period, the incidence of melanoma of the skin increased 16.6 percent: 15.8 percent among men, and 16.2 percent among women. Melanoma is more common among whites than among African Americans. Risk factors for melanoma of the skin include excessive exposure to sunlight, especially repeated blistering during childhood, fair complexion, family history, and the presence of moles with irregular borders on the skin. Prevention of melanoma should include avoiding the sun during the midday hours and wearing protective clothing and sun screen, and should focus on children. To detect melanoma early, adults should perform self examination and get a skin exam from their physician.

²⁸ Muir C, Weiland L. "Upper Aerodigestive Tract Cancers." *American Cancer Society. Cancer Supplement* 1995; 75 (1): 147-153.

²⁹ International Agency for Research on Cancer. IARC Monographs on the Evaluation of the Carcinogenic Risks of Chemicals to Humans. Tobacco Habits other than Smoking. Betelquid and Erecanot Chewing; and Some Related Nitrosamines. Vol 37, Lyon: Author, 1985.

B. Existing Cancer Resources

Community and Public Health Administration

The Community and Public Health Administration (CPHA), located within the Public Health Services Deputy Secretariat of the Maryland Department of Health and Mental Hygiene (DHMH) contains several offices that work on various aspects of cancer control, including the Division of Cancer Control, the Maryland State Council on Cancer Control, the Maryland Cancer Registry, the Office of Health Promotion, Education and Tobacco Use and Prevention, Office of Health Assessment, and Office of Environmental Coordination.

Funding for the Cancer Council and the Division of Cancer Control are as follows:

- *Maryland State Council on Cancer Control/Maryland Cancer Registry*

General funds	FY' 2000	\$ 1,052,163
Federal funds	FY' 2000	\$ 353,618
Total		\$ 1,405,781

- *Division of Cancer Control*

General funds	FY' 2000	\$10,390,882
Federal funds	FY' 2000	\$ 148,110
Total		\$10,538,992

C. Existing Cancer Programs, DHMH

1. Division of Cancer Control

The Division of Cancer Control is a unit within CPHA. It works with the Maryland Cancer Consortium, the State Council on Cancer Control, the Maryland Cancer Registry, and other offices within the Department of Health and Mental Hygiene, to develop the Maryland Cancer Control Plan. The Maryland Cancer Control Plan identifies cancer control priorities for the State based on data and scientific literature. It includes data to describe the cancer problem in the State, summarizes medical interventions that have been proven in clinical trials to reduce cancer mortality, identifies cancer priorities, and lists recommendations and strategies for the State. The Maryland Cancer Control Plan serves as the blueprint to guide the activities of the Division of Cancer Control and is updated every 3-4 years. The cancer control priorities identified in the Maryland Cancer Control Plan are the prevention and cessation of tobacco use, the early detection and treatment of colon cancer, the early detection and treatment of breast and cervical cancer, and adoption of a healthy diet and physical activity.

The goal of the Division of Cancer Control is to reduce death and disability due to cancer in Maryland by implementing proven medical interventions for populations in need in the State. The major activities and cancer programs operated by the Division of Cancer Control are set forth in Appendix 3.

2. Behavioral Risk Factors Surveillance Survey (BRFSS)

The Maryland Department of Health and Mental Hygiene houses the Maryland Behavioral Risk Factor Surveillance Survey (BRFSS) which is an annual telephone interview of a sample of a randomly selected statewide population, regarding health risk behaviors. The data collected helps cancer control professionals amend health risk behaviors that correspond to cancer incidence and mortality based on demographic and geographic information.

Certain risk factors such as smoking and occupation and industry information are collected in cancer registry data, but only 22 percent of the cases are complete and less than 80 percent of the complete cases are valid. Risk factors play an important role in cancer control initiatives, including, screening, diagnosis, treatment and education programs. While individual case data is not available to determine risk, it is possible to determine the smoking, occupation or screening history and behavior of the general population using grouped data from the BRFSS. A representative sample of cases from the state can be analyzed to determine the influence of risk factors on the risk of cancer or the stage of cancer at diagnosis. The BRFSS data set, which is prepared in a format (requested by states) that can be easily manipulated and analyzed, provides “countable” information to the support to the states.

3. Office of Environmental Coordination, DHMH

The Office of Environmental Health Coordination was created in 1998 in response to recommendations by a joint workgroup of professional staff from the Maryland Department of Environment (MDE). This office provides a locus of communication at DHMH for coordinating public health responses to environmental health issues with other state and federal agencies, academia, and national organizations. The Office director works in collaboration with the Maryland Cancer Registry (MCR), local health officers, local environmental health directors, and MDE Environmental Risk Assessment Program in cancer cluster investigations and risk communication.

4. Health Statistics Administration, DHMH

This Administration, a part of DHMH, registers birth, death, marriages and divorces, and provides population estimates and cancer mortality data. The director of the agency sits on the Maryland Cancer Registry Advisory Committee.

5. Maryland Office of Planning

This State agency provides services for geocoding of the MCR data and advises on improvements to geographic data collection and data entry. The agency also provides Maryland census data which the

MCR uses in determining the socioeconomic status of an area, small area variation studies, and cancer cluster analyses.

GIS coding of cancer data is also used as another monitoring method to assure the quality of state cancer registry data. The incidence to mortality ratios adjusted for age, sex and race (or specific for those characteristics) would be expected to be the same for all states. The differences which exceed expected standard error differences must be explained. The census tract data resulting from geocoding in the states can be used to monitor sentinel health events and the relationship between the occurrence of certain cancers and some agents in the environment.

6. Maryland Office of Health Promotion, Education and Tobacco Use Prevention, DHMH

This Office provides a planned combination of programs based on the state-of-the-art behavior change theories, which enable individuals and systems to change in ways that are health-enhancing. The program initiatives include: the Tobacco Use Prevention Unit, the Maternal and Child Health Education Program, the Maryland Kids in Safety Seats (KISS) Program, the Domestic Violence Program, the School Health Program and the Sexual Assault Awareness and Prevention Unit.

Major activities of this office include: participation in an expert work group to help design U.S. Department of Health and Human Services Secretary Shalala's tobacco initiative, implementation of a statewide media campaign to promote clean indoor air, preparation of tobacco control legislation crafted to increase the cigarette excise tax, ban on vending machines and restriction of youth access to tobacco. The Office also provides staff support to the Governor's Task Force to End Smoking in Maryland.

7. State Council on Cancer Control

The Maryland State Council on Cancer Control, formed by Executive Order 01.01.1997.01 (1991) is a 20-member body appointed by the Governor of Maryland with members selected from the State agencies and administrations involved in cancer screening, prevention and treatment services, as well as members representing the general public, the business community and the health and scientific disciplines concerned with cancer control. The Council advises the Governor, other government officials, and organizations in the private and public sectors on comprehensive State policies and programs necessary to reduce and control the cancer incidence and mortality in Maryland. The Council also oversees the operation of the MCR through its Cancer Registry Advisory Committee. The Standing Committees of the Council are set forth in Appendix 4.

Some of the significant accomplishments of the Council last year include establishing a long-term vision, mission and objective, initiating a cancer insurance screening study, hosting the second Cancer Symposium, and establishing a position on the national Multistate Tobacco Settlement.

Priorities of the Council for FY 1999 include: beginning strategic planning to strengthen infrastructure in tobacco control, awarding a new contract for tobacco media campaign, promoting policies and

programs that prevent young people from starting to smoke and helping adults quit, and protect our youths from access to tobacco products.

8. Maryland Cancer Registry (MCR)

The Maryland Cancer Registry (MCR) is a computerized data system which registers all cases of reportable human cancer diagnosed or treated in Maryland. The MCR is housed in CPHA at DHMH and overseen by the Maryland State Council on Cancer Control. The MCR began in 1982, requiring clinical laboratories and physicians to report. In 1992, the law was amended to require hospitals, freestanding radiation therapy centers and freestanding laboratories to report within six months of diagnosis or treatment. As of July 1993, Maryland Health-General Article §§18-203 and 18-204 require electronic cancer reporting from all reporting facilities. The current cancer reporting law requires freestanding ambulatory care facilities and physicians whose non-hospitalized cancer patients are not otherwise reported to report effective October 1996. The MCR has published statewide quality controlled cancer incidence data since 1992 and mortality data since 1996. See Appendix 5.

IV. 1999 Legislative Action

In response to the tobacco litigation settlement, Chapter 173 establishes a Cigarette Restitution Fund ("the Fund"). The Fund serves as a repository for Maryland's portion of the national tobacco settlement. The legislation sets forth the process by which monies can be distributed and certain requirements and restrictions on how the monies can be used. Chapter 173 also instructs the State Treasurer to manage the Fund within certain guidelines including, investing and reinvesting in the Fund in the same manner as other state funds and crediting any investment earnings to the Fund. The law also provides that expenditures from the Fund shall be made by an appropriation in the annual state budget, and that disbursements from the Fund to programs may be used solely to supplement, and not to supplant, funds already available for programs under federal or state law.

The Legislature also set parameters on specific programs for which the Fund could be used. At least 50 percent of the expenditures from the Fund shall be made for the following purposes:

- Reduction of the use of tobacco products by minors and smoking cessation programs;
- Crop conversion programs for land currently used to grow tobacco;
- Public and school education campaigns to decrease tobacco use;
- Enforcement of tobacco sales laws;
- Support of the Maryland Health Care Foundation;
- Primary rural health care;
- Prevention, treatment, and research concerning cancer, heart disease, lung disease, tobacco product use and control, including the operating costs and related capital projects;
- Substance abuse treatment and prevention programs; and
- Any other public purposes.

Additionally, once the Governor has determined which programs, projects and activities to fund, the law requires that he develop appropriate vision and mission statements, key goals, objectives, and performance indicators and include them in the annual state budget submission. The Governor must also report annually the total funds expended in the program during the prior fiscal year and report the specific public benefits derived from the funds. This report must be given to the Legislature by October 1st of each year.

LEGISLATURE:

- Created and set parameters for Cigarette Restitution Fund.

TREASURER:

- Manages the Fund.

GOVERNOR:

- Determines what to Fund.
- Develops Vision and Mission, Goals, Objectives and Performance Indicators.
- Reports on expenditures and public benefit.

V. Governor's Task Force to Conquer Cancer in Maryland

Governor Glendening's Executive Order No. 01.01.1999.17 outlines the structure and manner in which each of the Task Forces shall operate. See Appendix 6. Specifically, the Task Force to Conquer Cancer in Maryland (Task Force) is comprised of up to 21 members appointed by the Governor. It includes two members of the Senate, two members of the House of Delegates and up to 17 members with interest or expertise in this area, including but not limited to representatives of State government, public or private medical research institutions, the health care and the health insurance industries, patient advocacy and disease specialty organizations, private business and the community-at-large. The Governor appointed Donna L. Jacobs, Deputy Chief of Staff to Governor Glendening, chair and Georges C. Benjamin, M.D., Secretary of the Maryland Department of Health and Mental Hygiene, Vice Chair, from among the members of the Task Force. Staff support was provided by the Department of Health and Mental Hygiene and the Center for Health Policy at the University of Maryland, Baltimore County.

A. Executive Order

The Task Force's duties include making recommendations for allocation of funding from the Tobacco Settlement to achieve the goal of making Maryland the premier place in the nation for cancer prevention, education, research and treatment. The recommendations made by the Task Force must reflect the need to improve access to, and parity of health care for minority communities and individuals who live in rural areas of the State. Finally, the Task Force is required to provide the Governor with recommendations on or before October 31, 1999. Thereafter, the Governor may choose to delegate continuing duties to the Task Force in the implementation of approved action plans.

B. The Task Force Process

The Task Force to Conquer Cancer held several meetings to discuss the most advantageous way to allocate the anti-cancer settlement funds. The Task Force met on August 12 and 26, September 26, October 5, 21, and 27, 1999. Several presentations were made at these meetings to help task force members examine the issues of cancer in Maryland. Discussion items and presentations included:

- National trends in cancer incidence and mortality;
- State and local cancer control initiatives and needs in Maryland;
- Maryland trends in cancer incidence and mortality;
- The Youth Risk Behavior Factory Survey Data;
- The Maryland Adolescent Health Survey Data;
- National and state trends in oral cancer and mortality;
- Healthy People 2010/Healthy Maryland Project 2010;
- The current status of health insurance coverage for cancer victims;

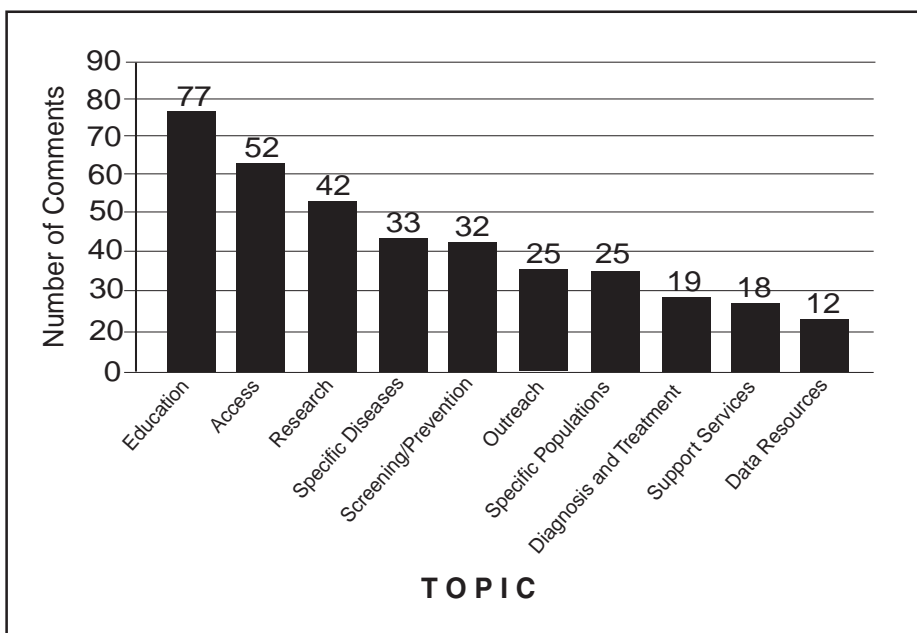
- The status of the tobacco settlement; and;
- Legislative and budget bill language from the Maryland General Assembly from the 1999 Legislative Session.

These discussions were led by prominent national and state experts on cancer such as Daniel Miller, M.D., M.P.H. from the Centers for Disease Control, who defined “cancer control” and presented cancer incidence data from the SEER Registry. Frances Phillips, R.N., M.H.A., health officer for Anne Arundel County; Genieve Matanoski, M.D., D.P.H. from The Johns Hopkins School of Hygiene and Public Health, and Marsha Bienia, M.B.A. from DHMH discussed state and local efforts and programs for cancer screening and surveillance. A discussion about the national and state trends in oral cancer was lead by Maria T. Canto, D.D.S., M.P.H., Cancer Prevention Fellow at the National Cancer Institute and Harry Goodman, D.M.D., M.P.H., Director of the Office of Oral Health at DHMH.

Presentations by Jan Markowitz, Director of the Office of Public Health Assessment in CPHA, DHMH and Milton McKenna of the Maryland State Department of Education focused on surveys used to assess the behaviors of Maryland youth and teenagers. Jeannette Jenkins, M.H.S. from DHMH spoke about Healthy People 2010/Healthy Maryland Project 2010. The Task Force also heard presentations from the University of Maryland Medical System together with the University of Maryland, Baltimore and The Johns Hopkins University on how they will use their funds to combat cancer in Maryland.

In addition, the Task Force held seven public hearings across the State throughout September. A total of 333 people attended the seven hearings, and 130 testified. Hearings were held in southern Maryland (20 attended, 17 testified), on the Eastern Shore (75 attended, 25 testified), in Baltimore City (100 attended, 37 testified), in western Maryland (44 attended, 15 testified), and in the Washington DC metropolitan area (85 attended, 36 testified). Twenty-seven people submitted written testimony only. Over 110 letters from cancer survivors were also submitted. The Task Force developed a Web site that summarizes comments made at the public hearings. The Web site is www.dhmf.state.md.us/cancer_tf. Ten broad themes were common throughout the hearings. Figure 8 illustrates the ten themes and their rate of occurrence.

Figure 8. Hearing Topics by Frequency



Education

PUBLIC WANTS EDUCATION

An education focus was recommended most frequently (77 times). People wanted to see greater educational efforts directed at everyone from patients to physicians to the community-at-large. They wanted an increase in available education about services and care, including clinical trials. Education was mentioned most in southern Maryland but was prominent throughout the state. Within education, there were areas that received a considerable amount of attention:

- *Wellness education.* This topic was mentioned 13 of the 77 times education was mentioned. Wellness education includes information about health education programs in schools and self-examinations. Education on nutrition, diet, risk and causative factors of cancer, exercise, and healthy living, in general were included in this category.
- *Media Campaign.* Nine people identified the need for a substantial media campaign with prevention and awareness messages. This included use of multiple media mechanisms (newspaper, television, radio, Internet) to educate the public. People also discussed the need to implement counter-marketing strategies to combat messages from tobacco companies. In many cases, people felt that these campaigns should be targeted to specific populations and designed in culturally sensitive ways depending upon the audience.
- *Informational Material.* Several health care providers expressed concern that cancer education materials such as brochures and videos are quite costly to produce and are therefore not easily available or accessible. As such, several people suggested increasing the number of and access to informational materials.

One individual suggested creating a cancer education summit that would train community leaders - clergy, doctors, people in private-sector businesses, educators, leaders of the NAACP, and others - on cancer-related topics. These might include the latest information in treatment and research as well as outreach techniques.

Access

PUBLIC WANTS BETTER ACCESS TO CARE

The need for better access to cancer care was the second most frequently mentioned theme. Access concerns were greatest on the Eastern Shore, although increased access was mentioned across the State. Discussions on access included: access to medical and dental care, treatment at convenient times, culturally appropriate care, and clinical trials. The need for telemedicine was specifically raised in these discussions. Additionally, support for alternative therapies, prosthesis, school based health centers and coordinated comprehensive care efforts was expressed. Eastern Shore residents, particularly, raised the difficulty of attracting doctors and specialists to the area. Within access, both transportation and access to affordable health care insurance were mentioned quite frequently.

- *Transportation.* People throughout the State illustrated the need for improved transportation systems for cancer patients. This issue was of particular concern in southern Maryland and on the Eastern Shore. Residents in those areas, specifically, do not have public transportation available

to them. Further, they must often go to either Washington, DC or Baltimore to access care and such travel is exceedingly long and costly. Travel costs frequently includes lodging in either city. In this context, telemedicine seemed the most appropriate solution especially to those on the Eastern Shore.

- *Insurance.* The cost of care and lack of affordable health care insurance was a concern for people across the State. Both factors were identified as the cause of an individual's unwillingness to access screening, prevention, diagnosis, and treatment. Several people recommended instituting universal health care for Maryland as a solution to this particular health care access problem.

Research

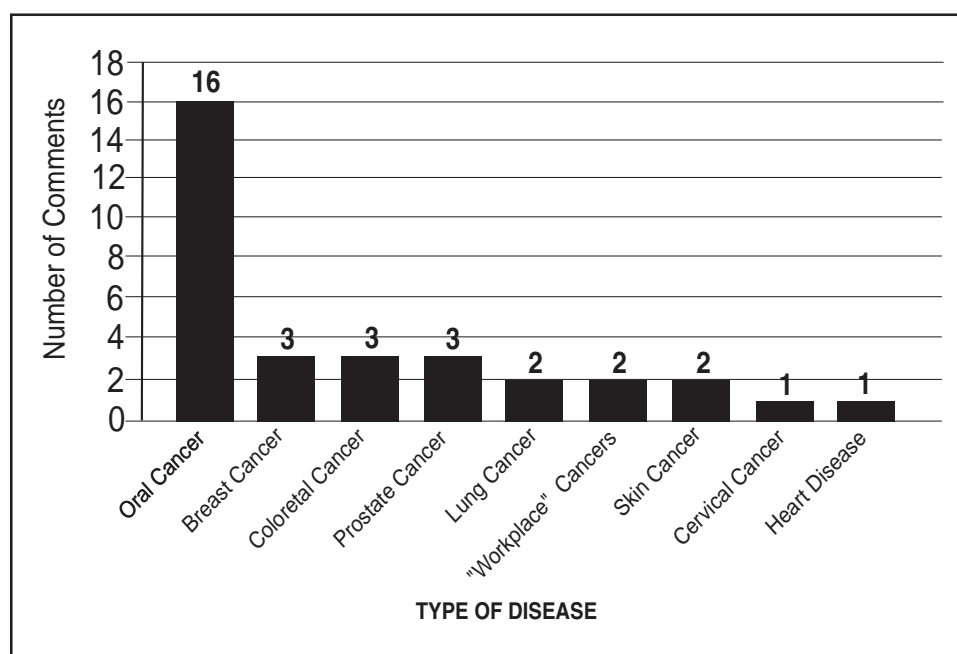
**MOST PUBLIC
WANTS
MORE RESEARCH**

Research was the topic mentioned third most frequently. People spoke of laboratory research, behavioral research, disease-specific and general research on screening, prevention, diagnosis, and treatment, and translational research. There was also interest in population-based and community-based research. The need for more environmental research was raised several times.

Specific Diseases

In the course of the public hearings, people mentioned the need to address several specific cancers and other diseases. For example, oral cancer was mentioned most frequently followed by breast, colorectal, and prostate cancer. Heart disease was also mentioned, because many of the same risk factors that lead to cancer may also lead to heart disease. Figure 9 shows the diseases mentioned.

Figure 9. Diseases by Frequency



Specific cancers were mentioned in each of the key topic areas: education, access, research, screening/prevention, diagnosis and treatment and outreach.

Screening/Prevention

The need for greater screening and prevention services was mentioned almost as commonly as care for specific diseases. Generally, people felt that current services need to be utilized more than they are. Awareness of such programs needs to be improved in order to enhance utilization of existing programs. Several people expressed a need for expanded screening/prevention. This expansion includes screening for new cancers (such as oral, colorectal and prostate) as well as increasing access to existing programs. Still, a few others supported taxes on cancer causing foods and tax incentives for pharmacies which cease selling tobacco products.

NEED TO EXPAND:

- Screening/Prevention
- Outreach
- Diagnosis and Treatment
- Efforts to reduce disparity
- Support services
- Surveillance

Outreach

Outreach concerns were generally consistent throughout the State. Outreach was seen as a vital component of any program the Task Force pursues. It includes increasing the use and number of the Well Mobiles as well as other types of mobile information units. Some people emphasized that targeted outreach is important. Outreach to both rural and African American communities, in particular, was deemed necessary. Strong comments were made about the need to use community-based outreach workers.

Specific Population Comments

Comments in this category primarily discussed needs specific to the African-American community. People also discussed the unique needs of poor and rural communities. The disparity between African-Americans and whites in both cancer incidence and mortality was of grave concern to people across the State. These comments were as common as those about outreach. Suggestions within this category emphasized the need for culturally-appropriate outreach.

Diagnosis and Treatment

There were 19 comments on diagnosis and treatment. Some were tied to screening and prevention. Several people discussed the importance of tying diagnosis and treatment to screening programs. Several individuals felt it was important to expand current diagnosis and treatment programs to include more cancers. Expansion of the Breast and Cervical Cancer Program was mentioned several times, most frequently on the Eastern Shore. Many speakers commented on the success of the Breast and Cervical Cancer Program and discussed this program as a good diagnosis and treatment model for other cancers.

Support Services

Psychosocial and emotional support services were discussed at every hearing. On the Eastern Shore, in particular, residents expressed the need for increased support. One person explained that there is no single place that an individual can go from the point of diagnosis to survivorship to get help with information or emotional support. The types of support services discussed range from support groups, to practical assistance for the family such as financial, insurance, travel, job loss and fear, to hospice care and pain management programs. Such services were frequently described as indispensable to someone fighting cancer.

Cancer Surveillance

Some concerned citizens and researchers discussed the importance of timely and accurate cancer registry data. Current Maryland cancer reporting law allows a Maryland facility to report a cancer case and initial cancer treatment information 6 months from the time of diagnosis or treatment. Facilities are required to submit computerized cancer reports quarterly. Only 80 percent of cancer cases are reported during this time frame. Most of the cancer cases reported late are head and neck cancers, oral cancers and intra-abdominal cancers, which usually require several months to a year to complete diagnostic procedures and treatment protocols.

Dr. Judith Sensebrenner, the Wicomico County Health Officer, explained that accurate and reliable data, especially trend data is essential to fight cancer. The State cancer registry provides the three indices to access the size of cancer problems: cancer incidence, mortality and survival rates, to the local health departments. Considering the size of population, and its subgroups at the county level, incomplete registration of cancer cases and inaccuracy of data variables can lead to unnecessary allocation of resources in cancer prevention areas.

Researchers at the Johns Hopkins University also discussed environmental cancers and the role of the cancer registry in assessing environmental risks. It was suggested that data variables indicating environmental exposure, such as occupations currently not collected should be added.

After listening to the presentations and considering the citizens testimony from the public hearings, the Task Force considered the overriding themes which emerged. Detailed discussions were held to determine how to best allocate funds to the major areas of need in Maryland. Members took into account the presentations of the University of Maryland Medical System, and the University of Maryland, Baltimore and The Johns Hopkins University what they learned from the citizens and experts, as well as their own personal knowledge when making recommendations for State funding priorities.

VI. Summary Proposals of the University of Maryland Medical System and the Johns Hopkins University

A. The University of Maryland Medical System (UMMS) Plan

The University of Maryland Medical System working with the University of Maryland, Baltimore³⁰ will develop and implement several strategies to address the challenge of fighting cancer in Maryland over the next ten years. The UMMS plan organizes existing resources and planned investments into three major areas: expanding patient care and research programs; establishing a state-wide cancer care network; and developing new programs and expanding programs that serve neighborhoods in West Baltimore. The UMMS plan is in partnership with the health and human services professional schools of the University of Maryland, Baltimore.

UMMS plans to use the funds to expand the Greenebaum Cancer Center and the School of Medicine's Program in Oncology. The expansion will focus on accelerating the existing translational research process and expanding the scope of our research and clinical program activities to benefit patients.

Through its existing relationships with UMB and community health care providers and by expanding the telemedicine network, UMMS proposes to build an infrastructure that will support a wide range of culturally sensitive cancer education, patient care, outreach and research activities regionally. This infrastructure will link and support a variety of providers, including local providers such as community physicians, the American Cancer Society, area health education centers, county health departments and regional hospital partners. It will afford all Maryland citizens access to state-of-the art cancer care.

Existing programs within UMMS local primary care centers will be expanded. Specifically, initiatives that increase education, prevention, screening and appropriate follow-up will be developed. See Appendix 7 and 9 for more detail on the University of Maryland Medical System's proposal and its planned cooperative cancer efforts with The Johns Hopkins University.³¹

B. The Johns Hopkins University Proposal

The proposal from Johns Hopkins focuses on three cancer areas: surveillance, prevention, and new and innovative therapies. Under surveillance, Johns Hopkins will track exposure to cancer causing and promoting agents among Marylanders, match it with data from the Maryland Cancer Registry, and develop and measure markers of exposure.

Prevention efforts will address primary, secondary and tertiary prevention. In primary prevention,

³⁰ Institute of Human Virology is not part of the collaborative effort.

³¹ The Task Force examined the UMMS proposal and The Johns Hopkins University's proposal to determine whether they were compatible with the Task Force recommendations and complimentary of one another. The Task Force is satisfied on both issues but urges continued oversight on the implementation and delivery of these plans.

efforts will focus on devising strategies to increase participation in prevention trials and programs and develop vaccines and other chemopreventive agents. Under secondary prevention, Johns Hopkins proposes to develop new methods of early detection of cancer through molecular diagnostics, develop methods to promote greater adherence to screening guidelines and improve access to screening for minority and underserved populations through community outreach programs. Under tertiary prevention, Johns Hopkins will develop new and better approaches to stimulate physical and psychological rehabilitation and to minimize disability.

In order to address the cancer areas listed above, Johns Hopkins proposes a funding plan for resources for facilities and technology, multidisciplinary cancer teams, and seed money for innovative programs. The first three years of the proposal targets the majority of funding for facilities and technology. The funding will support the construction of critical research laboratory buildings for both the School of Medicine and the School of Hygiene and Public Health. In the later years, funding will support the renovation of existing laboratories and the development of informatics.

Johns Hopkins will enhance existing cancer programs and therapies. Johns Hopkins identified the need to enhance the multidisciplinary cancer team, which includes behavioral scientists, clinicians with expertise in prevention methodologies, genetic and molecular epidemiologists, neighborhood health workers, and other health professionals.

Under new and innovative therapies, Johns Hopkins will devote funds toward biologic and genetic research that will aid in the establishment of new drugs and biologic agents for cancer control, research on new drugs, and early stage clinical testing involving pharmacologic studies. Funding for innovative programs will assist Johns Hopkins' translational research that moves new knowledge from the laboratory to the bedside. Over the ten year time span for this program, it is estimated that 42 percent will be spent on research and core facilities; 24 percent on education, 24 percent on prevention, and 10 percent on treatment. See Appendix 8 and 9 for more detail on The Johns Hopkins University proposal and its planned cooperative efforts with the University of Maryland Medical System.

VII. Task Force Recommendations

There is a crisis in coverage of, access to, and quality of, health care in the nation and in Maryland. Many speakers at the public hearings expressed grave concern over the lack of health insurance, the lack of access to health care for the uninsured, and whether currently insured populations are receiving adequate cancer care. The Task Force to Conquer Cancer in Maryland is also gravely concerned about the crisis in health care in Maryland and expressed a dire need for a comprehensive approach to assuring health care coverage for all Marylanders.

Currently, it is estimated that 15 percent of Marylanders are uninsured. Lack of health insurance reduces the likelihood that individuals will seek preventive care and/or timely treatment, impacting, of course, the effectiveness of cancer care. It is estimated that it would cost over \$300 million to provide health insurance coverage for all uninsured persons in Maryland. Providing universal health coverage would require funds well beyond those that are available. It would also offer no guarantee of targeted efforts to reduce cancer incidence and mortality. In addition, even if all of the funds available to the Task Force to Conquer Cancer were devoted solely to treatment (with no funds allocated for education, prevention/early detection or research), these funds would be insufficient to address all of the cancer treatment needs in the State. Because the Task Force is so concerned about the crisis in health care, and since coverage of, and access to, health care will ultimately impact on cancer care, the Task Force recommends that a small portion of funds (\$100,000) be set aside for the Maryland Healthcare Commission to study the problem of the uninsured in Maryland and to make recommendations on a strategy to increase health care coverage for more Marylanders³².

A. Guiding Principles

Cancer is the second leading cause of death in Maryland and the United States. By the early part of the 21st century, cancer deaths are projected to surpass deaths from cardiovascular disease and become the leading cause of death in the State. Although the funds from the tobacco settlement which are proposed to be allocated to this problem are quite significant, the problem of cancer is so large that it is important to recognize that these funds cannot support all of the cancer needs in Maryland.

For this reason, the recommendations of the Task Force are centered on certain overriding principles. Disbursement of tobacco settlement funds for cancer must be aimed at maximizing effectiveness and the impact on cancer mortality, leveraging additional resources, expanding existing resources, and foster-ing partnerships, collaboration and coordination among all entities and agencies involved, including, the University of Maryland Medical System and The Johns Hopkins University³³. In particular, for those UMMS and Hopkins it is critical that competition, redundancy and duplication of

³² Since the use of tobacco, and therefore nicotine addiction, starts in childhood, and since schools represent a captive place to reach children, Senator Green offered a proposal that 25 percent of funds be set aside for school-based clinics. After much discussion, the Task Force voted against incorporating this proposal into the recommendations section. Schools were seen as one possible channel to reach children, but other channels, such as recreation centers, may be equally effective, and the Task Force did not want to limit flexibility in methods used to reach children.

³³ The proposed plans for the University of Maryland Medical System and the Johns Hopkins University as well as a joint letter of understanding are included in Appendix 7, 8 and 9.

efforts are eliminated. Further, as funds are considered for disbursement, the extent to which entities plan to further leverage tobacco settlement funds must be weighted heavily.

In order to maximize the efficacy of these cancer funds, efforts should be focused where the greatest impacts on cancer can be realized. Accordingly, efforts must be focused on the most common cancers in Maryland, including lung, breast, colorectal and prostate cancer and those where early intervention has the greatest beneficial results, such as cervical, skin and oral cancer. Additionally, the tobacco settlement funds should not be used to supplant existing programs but rather to supplement existing, effective programs, where appropriate.

Since there is much that is still unknown about how to prevent, treat and cure cancer, there must be a balance between new research and application of interventions that are already known to reduce cancer mortality, increase survival, and improve quality of life. It is also critical that we recognize that funding priorities may evolve over time as our knowledge base and technology continue to improve.

The framework for conquering cancer will encompass the areas of education, prevention/early detection, treatment/supportive care, research, as well as surveillance/administration/evaluation. The efforts will focus on reducing disparities in cancer mortality, survival and quality of life among minorities and persons living in rural areas of the State. Interventions should be implemented at the grass roots, community level, should involve members of the community in planning and implementation and must address cultural sensitivities.

Reaching certain populations will be a factor in the effectiveness of programs. Program planning must be done in a way that maximizes effective outreach to minority and rural populations which are impacted disproportionately by cancer. Since many behaviors which impact on health, such as smoking, diet, exercise, and use of alcohol, start in youth, children are priority population. Further, any programs which are funded must be evaluated for effectiveness and supported and coordinated by a Statewide infrastructure for accountability. Continued funding must be dependent upon meeting key performance objectives.

Organizations, agencies, or entities that receive funds directly from the tobacco industry should be required to disclose this relationship and its nature and scope, when applying for cancer program funds. There should be no conflict of interest in organizations that receive funds to implement these recommendations. Whether an organization receives funds from the tobacco industry should be weighed in assessing an organization's ability to implement programs effectively and may disqualify an organization from receiving funds.

Project funding should be made consistent with these overriding principles. Funding must also be available to all types of organizations including for profit and not for profit entities, although a substantial percent of available dollars should be targeted to non-profits. Appropriate oversight of the uses of such funds by for profits entities is necessary. For profits should be required to present a plan which explains any potential resultant spin offs and how the State would benefit from them.

B. Goals and Objectives

Goals

- To reduce the burden of cancer in Maryland by decreasing cancer incidence and mortality and by improving survival and quality of life. (Similar to U.S. Healthy People 2010 goal)
- To eliminate any adverse disparity in cancer deaths and survival between minorities and whites and rural and urban geographic areas.
- To reduce Maryland's cancer mortality rate from the upper quartile of states to the lower quartile of states.
- To improve access to cancer care for medically underserved communities.
- To expand existing service, where appropriate.
- To leverage additional resources to address the problem of cancer by fostering partnerships, collaboration and coordination.
- To substantially reduce the prevalence of tobacco use (in accordance with the recommendations of the Task Force to End Smoking).

Overall Objectives

The objectives set forth below are 10 year, minimal level objectives. They are based upon currently recognized standards, medical knowledge and technology.

- **By 2010, to reduce cancer deaths to a rate of no more than 103 per 100,000 persons.**

(U.S. Healthy People 2010 Objective) (U.S. Baseline: 130 per 100,000 in 1995) (Maryland Baseline: 144 per 100,000 in 1996.)

(Note: U.S. Healthy People 2010 estimated a 21 percent improvement from 1995 to 2010. For Maryland to reach mortality rate of 103 per 100,000 by 2010 would mean a 43 percent improvement, or more than double the national goal rate of improvement.)

Data Source: Maryland Vital Statistics, MD DHMH.

- **By 2010, to reduce the disparity in cancer deaths between ethnic minorities and whites and between rural and urban geographic areas to a rate of 1.00.**
(Maryland Vital Statistics, MD DHMH).

REASONABLE OBJECTIVES WITH GREAT IMPACT:

- Lifestyle
- Diet
- Screenings
- Treatment/Supportive Care
- Research

- By 2010, to spend approximately 25 percent for prevention/early detection, 20 percent for education, 25 percent for treatment/supportive care, 20 percent for research, 10 percent for surveillance and 5 percent for administration³⁴.
- **(Developmental)** To increase access to care for medically underserved communities.
(Measurement to be developed.)
Data Source: DHMH, University of Maryland and Johns Hopkins University.
- To fund projects and programs in education, research, prevention/early detection and treatment/supportive care and capital projects only to the extent necessary to support such projects and programs.

Prevention/Early Detection Objectives

- **(Developmental)** By 2010, to increase to 75% the proportion of people of all ages who limit exposure to the sun, use sunscreens and protective clothing when exposed to sunlight, and avoid artificial sources of ultraviolet light (e.g. sun lamps, tanning booths).
(U.S. Healthy People 2010 objective.) (U.S. Baseline: limit sun exposure, 32%; use sunscreen, 29%, wear protective clothing, 28% in 1992.) (Maryland Baseline: approximately 25% in 1997).
Data Source: BRFS for adults and YRBS for youth.
- **(Developmental)** By 2010, increase to at least 75% the proportion of people aged 2 and older who meet the Dietary Guidelines' minimum average daily goal of at least five servings of vegetables and fruit.
(U.S. Healthy People 2010 objective.) (U.S. Baseline: 40% between 1994 - 1996.) (Maryland Baseline: 25 percent combined years 1994, 1995, 1996, and 1998).
Data Source: BRFS for adults and YRBS for youth.
- **(Developmental)** By 2010, increase to at least 80% the proportion of people aged 2 and older who meet the Dietary Guidelines' minimum average daily goal of at least six servings of grain products. (U.S. Healthy People 2010 objective.) (U.S. Baseline: 52% between 1994 - 1996.) (Maryland Baseline: unknown).
Data Source: None available at this time. (Funds would be needed to develop a data source for this objective.)
- Increase to at least 75 percent the proportion of people aged 2 and older who meet the Dietary Guidelines' average daily goals of no more than 30 percent of calories from fat.
(U.S. Healthy People 2010 objective.) (U.S. Baseline: from 1994 to 1996, 33 percent met the goal for fat.) (Maryland Baseline: unknown).

³⁴ Charts which illustrate the allocations for the University of Maryland Medical System, The Johns Hopkins University and remaining \$20 million are attached as Appendix 10.

- **Increase to at least 75 percent the proportion of people aged 2 and older who meet the Dietary Guidelines' average daily goal of less than 10 percent of calories from saturated fat.**

(U.S. Healthy People 2010 objective.) (U.S. Baseline: from 1994 to 1996, 35 percent met the goal for saturated fat.) (Maryland Baseline: unknown).

Data Source: None available at this time. (Funds would be needed to develop a data source for this objective.)

- **By 2010, to increase to at least the following percentages the proportion of Marylanders who get screened for various cancers:**

Colorectal cancer: 75% of people aged 50 and older who have received a colorectal screening examination (fecal occult blood stool test within the preceding 1 to 2 years) and 50% those who have ever received proctosigmoidoscopy.

(U.S. Healthy People 2010 objective.) (U.S. Baseline: fecal occult blood stool test, 30% in 1992; proctosigmoidoscopy, 33% in 1992.) (Maryland Baseline: Fecal occult blood stool test, 35 percent in 1996 - 1997; proctosigmoidoscopy, 36.3 percent in 1997.)

Data Source: BRFS, DHMH.

Breast cancer: 85 percent of women aged 40 and older who have received a breast examination and a mammogram within the preceding 2 years.

(U.S. Healthy People 2010 objective.) (U.S. Baseline: not available.) (Maryland Baseline: 71 percent for years 1994-1998.)

Data Source: BRFS, DHMH.

Cervical Cancer: 95 percent of women aged 18 and older who have ever received a Pap test and to at least 85 percent those who have received a Pap test within the preceding 3 years.

(U.S. Healthy People 2010 objective.) (U.S. Baseline: 94 percent ever and 77 percent "within the preceding 3 years" in 1994.) (Maryland Baseline: 94 percent ever" in 1998; 86.7 percent "within the preceding 3 years" in 1998.)

Data Source: BRFS, DHMH.

Oropharyngeal cancer: 80 percent of people aged 40 and older who have received an oral cancer examination in the preceding year.

(U.S. Healthy People 2010 uses age 50 and 50 percent as goal/objective.) (U.S. Baseline: 9% during a physician visit within the preceding year in 1992.) (Maryland Baseline: unknown.)

Data Source: None available at this time. (Funds would be needed to develop a data source for this objective.)

Skin cancer: 50 percent of people aged 50 and older who have received a skin cancer examination in the preceding year.

(U.S. Healthy People 2010 objective.) (U.S. Baseline: 17 percent during a physician visit within the preceding year in 1992.) (Maryland Baseline: unknown.)

Data Source: None available at this time. (Funds would be needed to develop a data source for this objective.)

Prostate cancer: 80 percent of men aged 50 and older who have ever received a PSA test and to 60 percent those who have received a PSA within the preceding year.

(There is no U.S. Healthy People 2010 objective for prostate cancer. However, the Task Force feels that prostate cancer is an important cancer that needs to be addressed.) (U.S. Baseline: not available.) (Maryland Baseline: 62.7 percent “ever” and 48.7 percent “in past year”.) There is some disagreement within the medical community regarding the usefulness of these tests. Since prostate cancer so disproportionately affects African American males, this Task Force believes current state-of-the-art screening is essential.

Data Source: BRFS, DHMH.

Prostate Cancer: 80 percent of men aged 50 and older have ever received a digital rectal exam and to 60 percent those who received a digital rectal exam within the preceding 1-2 years.

(There is currently no U.S. Healthy People objective on prostate cancer.) (U.S. baseline not available.) (Maryland Baseline: 71.2 percent “ever” in 1995; 56.1 percent “within the preceding 1-2 years.”)

Education Objectives

- **By 2010, to assure that 60 percent of funds that are allocated for education are received by community-based groups to provide education and outreach to reduce cancer in a culturally sensitive manner to ethnic minorities and underserved communities.**

Data Source: DHMH FMIS.

- **By 2010, to increase to at least 85 percent the proportion of primary care providers who routinely counsel patients about tobacco use cessation, diet modification, and cancer screening recommendations.**

(U.S. Healthy People 2010 objective.) (U.S. Baseline: tobacco use cessation, 43 percent- 50 percent; digital rectal exam, 49 percent; blood stool, 56 percent, proctoscopy, 23 percent; clinical breast exam, 78 percent; mammogram 37 percent; Pap test, 55 percent in 1989.) (Maryland Baseline: unknown.)

Data Source: None available at this time. (Funds would be needed to develop a data source for this objective.)

Treatment/Supportive Care Objectives

- **(Developmental) By 2010, to increase the percentage of colorectal, breast, prostate, oral cavity and pharynx, skin, and cervical cancers that are detected at an early stage.**

(Maryland Baseline: colon, 30.7 percent; rectum, 36.9 percent; breast, 59.3 percent; prostate, 65.9 percent; oral cavity, 37.4 percent; skin, 46.2 percent; invasive cervical, 46.8 percent in 1996.)

Data Source: Maryland Cancer Registry, DHMH.

- **(Developmental)** By 2010, to increase the proportion of cancer patients who participate in clinical trials.
(U.S. Baseline: 3-5% of all cancer patients.) (Maryland Baseline: unknown.)
Data Source: (None available at this time.)
- **(Developmental)** By 2010, to provide coverage for diagnosis and treatment for people screened for cancer under the funds allocated for the recommendations of the Task Force to Conquer Cancer.
Data Source: DHMH expenditures for diagnosis and treatment.
- **(Developmental)** By 2010, to provide 20 percent of the funds set aside for Treatment/Supportive Care for cancer support services such as transportation, cancer support groups, case management, and hospice care.
Data Source: DHMH expenditures for cancer support services.

Research Objectives

- **(Developmental)** By 2010, to provide funds to research ways to prevent cancer and research new and early screening and diagnosis methods and tests.
Data Source: Institutions performing cancer research in Maryland.
- **(Developmental)** By 2010, to provide funds to research environmental carcinogens, their location in Maryland and ways to decrease exposure to environmental and occupational carcinogens.
Data Source: None available at this time. (Funds would be needed to develop a data source for this objective).

1. Prevention/Early Detection (25 percent of annual program budget - \$5 Million)³⁵

It is recommended that approximately 25 percent of the funds be spent on prevention/early detection. The primary focus of these activities should be early detection, targeted screening and risk factor reduction such as diet and tobacco use. Controlled clinical trials have shown that mortality from colorectal and breast cancer can be reduced with early detection. Screening for cancer of the oral cavity, pharynx and skin can also yield early detection of cancer. Screening of cervical cancer can detect precancerous changes on the cervix and completely avoid the development of invasive cervical these cancers. A major controlled clinical trial is currently underway to

ALLOCATION OF BUDGET

25% Prevention/Early Detection (\$5M)
20% Education (\$4M)
20% Treatment/Supportive Care (\$4M)
20% Research (\$4M)
10% Surveillance and Evaluation (\$2M)
5% Administration (\$1M)

³⁵ The Task Force recommends that the University of Maryland Medical System and The Johns Hopkins University each receive the full \$15M per year considered by Governor Glendening. These institutions should not receive additional funds from the remaining appropriation. The approximate allocations in this section and those which follow are percentages of the \$20M which remain after the allocations to the University of Maryland and The Johns Hopkins University.

determine if screening for prostate, lung and ovarian cancer can reduce mortality. Implementing early detection programs for the cancers known to be susceptible to early screening can have a significant impact on cancer mortality.

Improved certain dietary behaviors have been shown to reduce the risk of developing certain cancers. For example, a diet high in fiber, fruits and vegetables and low in fat may reduce the risk of developing colon cancer and some other cancers. Encouraging the public to adopt these dietary behaviors could have a sizeable impact on the incidence of certain cancers, while also reducing the risk of cardiovascular disease.

2. Education (20 percent of annual program budget - \$4 Million)

It is recommended that approximately 20 percent of the funds be spent on education. There should be activities focused on both education of the public, including youth, and education of health care providers. Education of the public should focus on the need for screening, self examination and healthy lifestyles including the importance of, and examples of, good nutrition, appropriate physical activity and avoiding excessive exposure to the sun.

Public education should be provided in culturally, sensitive and appropriate manners and carried out through community based channels. Effective community based programs can include use of volunteers, community workers from local areas and neighborhood retirees. The development of partnerships within communities including, for example, churches, beauty salons, neighborhood stores, pharmacies, banks, post offices, etc. is encouraged. Community based programs should be designed to most effectively reach intended population(s). Consideration should be given to programs which utilize "train the trainer" concepts in order to enhance the community knowledge base and ability to educate its residents. Public education should also be conducted through schools and school-based health clinics across the State.³⁶

Education of health care professionals should focus on ensuring that current standards of care are provided, increasing participation or referral of patients to clinical trials, and providing or referring patients to resources for support. Health care professionals include physicians, dentists, nurses, pharmacists, social workers, dental hygienists and other allied health professionals.

Education of healthcare professionals, including both training of intending professionals and continuing education of health professionals will be handled, in large part, by the University of Maryland, Baltimore. Nonetheless, it is also essential that professional associations, such as MedChi, the Maryland Dental Association, the Maryland Nurses Association, etc. provide continuing professional training as well.

The use of varied communication modalities is also generally encouraged. There are many factors about cancer which need to be understood including the effects of exposure to carcinogens in the home or in the workplace and it is important to provide sufficient information to help overcome

³⁶ Education of children on risk behavior and cancer in general can be coordinated with the youth education programs recommended by the Governor's Task Force to End Smoking.

people's fear of the disease, a common barrier to seeking treatment. These issues must be approached in a variety of ways. The media, public service announcements, cancer survivors, and health professionals can all be effective in promoting knowledge and reducing barriers to cancer care.

3. Treatment/Supportive Care (20 percent of annual program budget - \$4 Million)

It is important to recognize that the available funds, even if they were all devoted to treatment, would be insufficient to address all of the treatment needs in this State. Therefore, the Task Force recommends focusing treatment efforts on the most prevalent cancer sites.

There are gaps in support services for cancer patients, such as transportation, case management, hospice care and cancer support groups in certain regions of the State. There is a strong need to provide support for these services. Twenty percent of the treatment/supportive care funds should be devoted to these types of supportive care services.

4. Research (20 percent of annual program budget - \$4 Million)

It is recommended that 20 percent of the funds be spent on research. The research should include increasing accrual to clinical trials, investigating ways to prevent cancer, behavioral research on how to communicate new research findings to the public, and research on environmental carcinogens.

Clinical trials are the best way to increase our knowledge about how to prevent, treat, and cure cancer. There are different clinical trials for different areas, including clinical trials focusing on prevention, genetics, early detection, or treatment. Currently, only 3-5 percent of cancer patients are participating in clinical trials. There is a need for more patients to participate in clinical trials, especially minorities.

Further, all efforts to improve minority participation in clinical trials must be culturally sensitive and culturally appropriate in order to be effective. There is a need for more research on how to prevent cancer (e.g., genetic testing). There is also a need for better ways to communicate new scientific findings to the public for greater understanding and quick adoption of behaviors to prevent cancers, detect cancer early and treat cancers. There is a need for more research on environmental carcinogens, for mapping of cancers by geographic location (i.e., geocoding), and for instituting environmental and occupational policies to reduce exposure to known carcinogens.

5. Surveillance and Evaluation (10 percent of budget - \$2 Million)

It is recommended that 10 percent of funds be allocated for surveillance and evaluation. These percentages are based on the recommendations of the federal Centers for Disease Control and Prevention in the document entitled, "Best Practices for Comprehensive Tobacco Control Programs, August, 1999".

Surveillance

Surveillance is the regular and ongoing monitoring of cancer incidence, mortality and selected related variables that are known to impact state rates. The surveillance system must be coordinated with federal cancer surveillance programs and must rely heavily on the science of epidemiology which systemically studies the history of diseases in the population. These funds should enhance the existing system by adding a geographic mapping capability, integrating related data bases, increasing analysis and using developing information technology to provide more timely access to information. The surveillance system should also be coordinated with the State's developing information technology network.

Evaluation

Evaluation is the analysis of surveillance and other data to determine process (implementation results), outcomes (intended and unintended) and impacts on the health care system. An effective evaluation system is essential to (1) provide evidence that the investment is having a positive effect, (2) to generate useful and timely feedback to guide continuing implementation, and (3) to provide knowledge to shape future policy and research agendas. Several levels of evaluation will need to be coordinated. Internal evaluation by individual providers, partnerships and networks will be conducted to gauge the progress of grants and contracts. External evaluations will focus on broader program issues such as statewide coverage, special populations, dissemination of new knowledge and accountability. An evaluation strategy will need to be designed that identifies performance monitoring measures and outcome indicators for tracking and annual reporting on Maryland's Cancer Control Program.

Program evaluation efforts should measure achievement of short term, intermediate and long term outcome objectives, such as three, five or ten years, in addition to the Legislative's order for annual reporting, recognizing that significant reductions in mortality and morbidity are not obtainable in the immediate short term.

It is recommended that the Department of Health and Mental Hygiene be given responsibility for managing the surveillance and evaluation at the State level. The Department has managed the existing Maryland Cancer Registry program for the past nine years, carrying out a broad range of surveillance activities for the State. Evaluation activities should be conducted through use of the Cancer Registry data and information from the Department's cancer intervention programs.³⁷

³⁷ In addition, as mentioned above on Chapter 173 requires annual reporting of the total funds expended and the specific outcomes or public benefits resulting from that expenditures.

³⁸ The recommended 10 percent and 5 percent allocations for surveillance and evaluation and program administration, respectively refer to percentage allocations from \$20M, not the total \$50M devoted to the cancer program. The Task Force recommends that the surveillance and evaluation components for the programs at the University of Maryland, Baltimore and The Johns Hopkins University be funded through their annual allocations and conducted by an independent evaluator.

6. Administration (5 percent of annual program budget - \$1 Million)

It is recommended that 5 percent of the program funds be allocated for the administration and management of the State's Cancer Control Program.³⁸ An effective statewide cancer control program will need a strong management structure to facilitate coordination of the wide range of program components involving multiple levels of state government, local governments and partnerships throughout the State. Program funds must be disseminated to a variety of providers.

The Department of Health and Mental Hygiene should be given the lead responsibility for the administration and management of the programs to conquer cancer. The Department of Health and Mental Hygiene currently houses the Maryland State Governor's Council on Cancer Control, which provides oversight of the Maryland Cancer Registry, and the Division of Cancer Control, which implements the Breast and Cervical Screening Program and the Breast and Cervical Cancer Diagnosis and Treatment Program.

These cancer units should be combined into one unit called the Maryland Center for Cancer Surveillance and Control for better efficiency, coordination and collaboration. This unit should be given responsibility for managing an expanded surveillance systems.

7. Implementation Mechanism

The Maryland Center for Cancer Surveillance and Control should coordinate the procurement process including writing Requests for Application (RFAs) and Requests for Proposals (RFPs), as needed. The Task Force recommends that the cancer funds be distributed through procurement, with approximately 50 percent distributed by grant and 50 percent distributed by contract. Both grants and contracts should be distributed based on the guiding principles, goals and objectives detailed in the Task Force's Report in order to best insure an effective outcomes and accountability for expenditures.

C. Summary

In order to reduce the burden of cancer, we must work together to integrate and coordinate cancer programs and services. The recommendations listed above are designed to provide a comprehensive approach to controlling cancer in Maryland. By leveraging resources, targeting adversely impacted communities and working collaboratively in a focused and comprehensive manner, we can achieve productive results.

VIII. Conclusion

Governor Glendening's proposal to include \$50 million in the State budget for each of the next ten (10) years provides this State with a tremendous opportunity to become a leader in cancer care and place us at the forefront of developments in cancer research. Our goal is to move Maryland from the top to the bottom of the list of states impacted by cancer.

In order to maximize the efficacy of these cancer funds, efforts should be focused where the greatest impacts on cancer can be realized. Accordingly, efforts must be focused on the most common cancers in Maryland, including lung, breast, colorectal and prostate cancer and those where early intervention has the greatest beneficial results, such as cervical, skin and oral cancer. Additionally, the tobacco settlement funds should not be used to supplant existing programs but rather to supplement existing, effective programs, where appropriate.

Cancer claims too many lives in Maryland. It is estimated that one third of cancer deaths each year are due to smoking and one third are due to dietary factors. Many cancer deaths could be prevented by eliminating smoking, by making appropriate dietary choices, by engaging in adequate, regular physical activity and by avoiding excessive exposure to the sun. Regular screening examinations by a health care professional can result in the detection of cancers of the breast, colon, rectum, cervix, prostate, oral cavity, and skin at earlier stages, when treatment is likely to be more successful. Pain management can help to control pain and the quality of life.

The cancer-dedicated funds proposed by Governor Glendening will make a difference on these issues. We are fortunate to have two major cancer research centers and an increasing number of community hospital-based cancer centers in the State. We have a statewide cancer registry which collects complete data on cancer incidence and stage of disease. Maryland must build on these resources to change our cancer history.

The recommendations of the Task Force to Conquer Cancer are designed to decrease the incidence, mortality and morbidity of cancer in this State. A comprehensive and collaborative effort involving the public, health professionals, the research community, the public health community, and policy makers is needed to reduce the burden of cancer in Maryland. These recommendations provide that framework to fight cancer in the 21st century.

***Let's WIN the battle against
cancer in the 21st century!!***

Appendix 1

National Tobacco Settlement: Issues Related to Maryland's Receipt of Settlement Funds

The revenue that Maryland anticipates receiving as a result of its settlement with the tobacco industry is not a sum certain. Rather, it is a share of a national settlement fund created by the tobacco industry under the national settlement. Under the terms of the settlement, industry contributions to this fund can decrease under certain circumstances, thereby reducing in turn the revenue that Maryland might anticipate receiving from the settlement.

ADJUSTMENTS TO TOBACCO INDUSTRY CONTRIBUTIONS

Inflation Adjustment shall be applied to all eligible industry payments.

Volume Adjustment means an upward or downward adjustment the payments due from the original participating tobacco manufacturers should the volume of cigarettes that they produce or import to the United States changes. To the extent that state expenditures of settlement monies are predicated on the problems that result from tobacco use, a decline in such revenue when accompanied by a decline in tobacco use may not be problematic.

Previously Settled States Reduction means a reduction in the total amount due from the industry as a part of a "national" settlement because the industry had previously settled cases with a few states individually and prior to the "national" settlement.

Offset for Miscalculated or Disputed Payments makes adjustments to the amount owed by an individual manufacturer based upon previous errors or disputes.

Federal Tobacco Related Legislation Adjustment refers to an adjustment to be made if the federal government were to take any action prior to November 30, 2002 which causes the participating tobacco manufacturers to have to make additional payments which are ultimately received by the settling states, whether due to increased taxes, settlement, or other means.

Non-Participating Manufacturers Adjustment is a mechanism intended to protect those tobacco companies that entered into the national settlement from those tobacco companies that did not. To the extent that settling companies lose market share to non-settling companies, there is a formula which will reduce the settlement payments to be made by the settling companies to the states. This adjustment is calculated each year. Maryland will NOT be subject to this NPM adjustment so long as it keeps in full force and effect the "Qualifying Statute" (SB 305) enacted during the 1999 legislative session and which neutralizes the cost advantages that would otherwise inure to the benefit of non-participating tobacco manufacturers.

BANKRUPTCY AND SALE ISSUES

No Sale of Business or Brands to Escape Terms of Agreement. Under the terms of the Master Settlement Agreement, no original participating tobacco manufacturer is permitted to sell or transfer any of its cigarette brands, brand names, cigarette product formulas, or its cigarette business unless for use exclusively outside the United States unless the purchaser or transferee is also an original participating tobacco manufacturer or agrees to assume the obligations of the transferring manufacturer under the agreement with respect to that which is the subject of the sale or transfer.

Prior Notice of Transfer of Assets. The tobacco industry is required to provide the states with prior notice concerning any proposed transfer of material assets.

Moving Tobacco Companies Offshore. The settlement agreement is between the corporations and the respective states. It is not dependent upon whether they or their operations are located physically within the United States or their territories.

Bankruptcy Filings. Nothing in the Master Settlement Agreement prevents a participating tobacco manufacturer from filing for bankruptcy. The Agreement provides that the States shall have the right to pursue their respective claims against the bankrupt.

Appendix 2

Task Force to Conquer Cancer Membership

Donna L. Jacobs, Esquire,
Deputy Chief of Staff to the Governor, Chair

Georges C. Benjamin, M.D.,
Secretary, Department of Health and Mental
Hygiene, Vice Chair

Honorable Leo Green,
State Senator

Honorable Leonard Teitelbaum,
State Senator

Honorable Dan K. Morhaim,
State Delegate

Honorable Tod D. Sher,
State Delegate

Martin D. Abeloff, M.D.,
Director, Johns Hopkins Oncology Center

Susan Athey-Oxford,
President, Garrett County
League of Women Voters

Michele H. Bloch, M.D., Ph.D.,
Program Director, Tobacco Control Research, NCI

Rita Costello,
Vice President, Strategic Planning

Linda M. Frisch,
Assistant Executive Director, Program
Services, American Lung Association

Stewart J. Greenebaum, Partner,
Greenebaum and Rose Associates

Charles D. Leiss,
Chief Executive Officer, American Cancer Society

Edward D. Miller, M.D.,
Dean of Medical and CEO,
Johns Hopkins Hospital

Frances B. Phillips,
Health Officer, Anne Arundel County Health
Department

David J. Ramsay, D.M., D.Phil.,
President, University of Maryland, Baltimore

Nina Cole Rawlings, M.D.,
University Care of Howard Park

Stephen C. Schimpff, M.D.,
Executive Vice President, University of Maryland

Wayne C. Spiggle, M.D.,
Partner, Braddock Medical Group

Walter R. Talbot, Jr., D.D.S.,
Maxillofacial Specialist

Charles G. Tildon, Jr.,
Management Consultant and Retired President
of Baltimore City Community College

Planning Team Members

Marsha Bienia, M.B.A.
Jesse Heier

Carlessia A. Hussein, Dr. P.H.

Lynn Khoo, M.D., M.P.H.

Virginia Thomas

Appendix 3

Major Activities of the Division of Cancer Control

A. Cancer Educational Campaign

The Division of Cancer Control, in coordination with the Office of Health Promotion, Education and Tobacco Use Prevention, is implementing a Statewide cancer educational campaign focusing on the prevention and cessation of tobacco use and the early detection of breast and cervical cancer. Examples of activities conducted under this campaign include implementation of focus groups; development and airing of TV and radio spots, print ads, and transit bus signs on tobacco, breast and cervical cancer; development and production of display boards for breast and cervical cancer; media training for local health department staff; a Statewide breast and cervical cancer conference; development of brochures for the Maryland Cancer Consortium; printing of curriculum guides and development of a video for use in physician education and clinical breast examination; tobacco use prevention materials for parents and school aged children; a statewide, quarterly Cancerbeat newsletter; and a toll-free telephone line for the public to call to find out where to get free or low cost mammograms or materials on tobacco prevention and cessation.

B. Breast and Cervical Cancer Lay Health Outreach Workers

The Division awards grants to each of the 24 local health departments to hire community based, lay health outreach workers to assist in recruiting and recalling patients for breast and cervical cancer screening. These outreach workers have similar demographics as the women being screened.

C. CDC Breast and Cervical Cancer Grant

The Division of Cancer Control has a cooperative agreement with the Centers for Disease Control and Prevention to implement a Statewide breast and cervical cancer program. The purpose of this grant is to provide breast and cervical screening, referral, and follow up services statewide to low income, non-Medical Assistance eligible, uninsured or underinsured women 50 years of age and older. Grants are awarded to each of the twenty four local health departments to coordinate outreach, screening, and follow up services. The local health departments subcontract with private (e.g., radiologists, private physicians, medical laboratories) to provide the clinical services. This grant also provides funding for public and professional education, data collection, surveillance, quality assurance, and coalition building. Through June 1995, 19,536 women were screened, and 158 breast cancers, 57 pre-cancerous lesions, and 6 invasive cervical cancers were detected.

D. HSCRC Coordinated Breast Cancer Screening Program

In coordination with the Health Services Cost Review Commission, the Division implemented a statewide breast cancer education, screening and diagnostic program through 28 community hospitals in the State. Funding for the HSCRC Breast Cancer Screening Program terminated on June 30, 1997. Through June 1995, 44,653 women were screened, and 322 breast cancers and 58 pre-cancerous cervical lesions, and 3 invasive cervical cancers were detected.

E. Reimbursement for Breast and Cervical Cancer Diagnosis and Treatment Program

The Reimbursement for Breast and Cervical Cancer Diagnosis and Treatment is a state-funded program that reimburses participating providers for providing breast and cervical cancer diagnostic and treatment services (e.g., biopsy, surgery, chemotherapy, radiation therapy, etc.) to low income, non-Medical Assistance eligible, uninsured or underinsured Maryland residents. This program is operated centrally by the Division of Cancer Control as a fee-for-service reimbursement program and is governed by State regulation. Participating medical providers include physicians, nurse practitioners, nurse anesthetists, physical therapists, hospitals, pharmacies, medical laboratories, home health agencies, free standing ambulatory surgical centers, and medical equipment suppliers. Eligible patients must fill out a patient application form and must meet certain financial, health insurance, and medical criteria. This program is the payor of last resort; medical providers must bill any insurance that a patient may have before submitting a bill to the Department. This program reimburses medical providers for covered services at the State Medical Assistance rate. Through October, 1999, there were 2,907 participating medical providers and 14,405 clients in this program. Approximately 40,000 invoices were processed by this program in fiscal year 1999.

F. Diagnosis and Treatment Eligibility Coordinator Grants

The Department awards grants to each of the 24 local health departments to hire a part time nurse to determine patient eligibility for the Breast and Cervical Cancer Diagnosis and Treatment Program. Additionally, the nurse provides the patient with a list of eligible providers, and to assist the patient with making appointments with private medical providers.

G. State-funded Breast Cancer Program

In fiscal year 1999, Governor Glendening provided \$2.6 million in state funds to screen uninsured and underinsured low income women aged 40-49 years for breast cancer and to provide funds for diagnosis and treatment. The Maryland Legislature also passed a law that provided funds to screen, diagnose and treat women aged 40 and older. These funds were provided in large part to replace the HSCRC Illness Prevention Program's Coordinated Breast Cancer Screening Program under which 28 hospitals had provided breast cancer screening to women 40 years and older. These funds are being used to augment the CDC Breast and Cervical Cancer grant in the local health departments and the Reimbursement for Breast and Cervical Cancer Diagnosis and Treatment Program.

H. State Laws

The following laws are carried out the Division of Cancer Control:

- Alternative Methods of Breast Cancer Treatment,
- Breast Implantation; and
- Hospitals and Mammography Literature

In 1987, the Maryland General Assembly passed a law entitled, "Alternative Methods of Cancer Treatment" (Article 20-113). This law requires the Maryland Department of Health and Mental Hygiene to provide all physicians, who treat patients for breast cancer in Maryland, with a booklet that describes the various breast cancer treatments and their advantages, disadvantages, and risks. The treating physician is required by the law to give a written summary of treatment options to the patient after the patient has been informed of a diagnosis of breast cancer, have the patient sign a form acknowledging that she received the summary, and file the signature form in the patient's medical record.

In 1988, the Maryland General Assembly passed a law entitled, "Breast Implantation" (Article 20-114). This law requires DHMH to provide all physicians who perform breast implantation in Maryland with a booklet that describes the advantages, disadvantages and risks associated with breast implantation. The treating physician is required by the law to give the written summary to the patient at least five days before the breast implant operation, have the patient sign a form acknowledging that she received the summary, and file the signature form in the patient's medical record.

In 1996, the Maryland General Assembly passed a law entitled, "Hospitals - Requirements - Mammography Educational Materials" (Article 19-348). This law requires each hospital in Maryland to offer mammography educational materials to each female patient when medically appropriate for the patient. The Department of Health and Mental Hygiene, in collaboration with the Maryland Division of the American Cancer Society, Cancer Information Service, Maryland Hospital Association, Maryland State Medical Society, Arm-in-Arm Breast Cancer Support Group, YWCA, Me, the Maryland Affiliate of the Susan G. Komen Breast Cancer Foundation, and the Community Agency Committee of the Maryland Cancer Consortium developed guidelines and selected mammography educational materials to be used under this law.

I. Skin Cancer Prevention

The DHMH works with MedChi, which received a three year cooperative agreement from the Centers for Disease Prevention and Control to establish a statewide Coalition for Skin Cancer Prevention in Maryland and to conduct educational activities to provide skin cancer prevention primarily among children (e.g., sun avoidance during peak hours, the importance of long sleeve shirts, hats, sunscreen, etc.)

J. Maryland Cancer Consortium

The Maryland Cancer Consortium was formed by the Division of Cancer Control to advise the Division on its activities. The mission of the Maryland Cancer Consortium is to bring together representatives from the public and private sector to advise the Department of Health and Mental Hygiene on interventions to reduce cancer mortality and morbidity. The Maryland Cancer Consortium is composed of three advisory committees: the Medical Advisory Committee, the Scientific and Research Committee and the Community Agency Committee.

The Medical Advisory Committee serves as a resource to advise the Department on medical issues related to the early detection, diagnosis and treatment of cancer. The Medical Advisory Committee developed the booklet entitled "If You Have Breast Cancer: Treatments That Are Available," that is used under the "Alternative Methods of Breast Cancer Treatment in Maryland. The Medical Advisory Committee developed "Minimal Clinical Elements for the CDC Breast and Cervical Cancer Program" that serves as clinical guidelines for the Department for its Breast and Cervical Cancer program. The Medical Advisory Committee advises the Department of medical issues in the Reimbursement for Breast and Cervical Cancer Diagnosis and Treatment Program.

The Community Agency Committee is made up of volunteer representatives from various public, private and non profit institutions and agencies working to address issues of cancer prevention and education. The Community Agency Committee meets monthly to bring together these agencies to promote public awareness and communication of cancer control activities throughout Maryland, advocate for women and men in need for cancer screening, diagnostic, and treatment services, and advise the Department on the development and implementation of cancer control activities.

The Scientific and Research Committee advises the Department on new programs priority areas and assists the Department in updating the Maryland Cancer Control Plan.

The Division, through the local health departments, works with consumer advocates throughout the state. The consumer advocates assist the Department with reviewing written and visual materials, assist local health departments with outreach activities, and advocate for and support cancer prevention, detection and treatment services.

Appendix 4

Standing Committees of the Maryland State Council on Cancer Control

- 1. Cancer Surveillance Committee** – Evaluates and guides the use of a comprehensive cancer surveillance system in Maryland by reviewing and reporting estimates of cancer incidence and mortality in Maryland, monitoring annual cancer incidence and mortality trends to identify areas that need further analysis, promoting studies designed to address existing and planned State cancer control interventions, such as environmental, occupational, socioeconomic, dietary and public health related exposures, as well as screening, early detection and treatment practices; and developing mechanisms to stable support of an effective surveillance system of cancer in Maryland.
- 2. Public Awareness Committee** – Recommends strategies for the coordination of cancer related activities which raise the level of public awareness. The Committee is responsible for: monitoring the effectiveness of the DHMH multi-year cancer prevention marketing campaign, coordinating the Council's Cancer Control conference and workshops; and recommending and facilitating any other activities which the Committee believes will raise the level of public awareness regarding cancer prevention and control.
- 3. Legislative Committee** – Advises the Council of cancer related federal, State and local legislation which should be supported by the Governor and/or state agencies. In order to accomplish this, the Committee must: keep abreast of legislative initiatives or enacted legislation at the federal, state and local levels in the area of cancer control, develop Council legislative positions; and promote Council supported cancer control legislation.
- 4. Cancer Registry Advisory Committee (CRAC)** - Determines and review necessary policies and procedures regarding registry operation to evaluate and guide the utility of the Maryland Cancer Registry. The Committee is composed of 20 members from the State health and environmental agencies, Johns Hopkins University, University of Maryland, University of Maryland Hospital, laboratory and ambulatory center associations and Maryland Tumor Registrars' Association, chaired by a scientific member of the State Council on Cancer Control. The CRAC is responsible for overall direction of the MCR operation. It also reviews the MCR data completeness and quality, providing direction on the utilization of MCR data for research, special studies and analyses to ensure patient and reporting facility confidentiality, and identifying and recommending methods to increase the quality and usefulness of MCR data as a tool for planning, evaluating and targeting cancer control programs.

Appendix 5

Maryland Cancer Registry Data

Population-based Statewide Registry : The MCR is a population-based incidence central registry. The primary goal of the MCR is to determine cancer rates and trends in the population. Data reported is quality-controlled, and the incidence rates are calculated by site of tumor and patients' demographics. In addition, some treatment and outcome data may be collected for analytic evaluation of diagnostic procedures, or the stage of cancer at diagnosis. Follow-up registries are the multipurpose population-based registries with the primary goals to support research or control. These registries collect more extensive follow-up of outcome measures and treatment information in addition to the variables collected by the incidence registries.

Cancer Incidence Data: The MCR has published statewide cancer incidence data reports for 1992 through 1996. Data completeness in the MCR was over 98% and the error rate was less than the North American Association of Central Cancer Registry (NAACCR) average. Data quality and error rates varied depending on the reporting facility's affiliation with the American College of Surgeons (ACoS). Hospitals without cancer registries and low case load hospitals had high error rates. Of 56 hospitals in Maryland, only 26 have ACoS-affiliated registries as of 1998. Timeliness of reporting varies based on type of facility. In the first six months of 1998, hospitals reported 89% of expected cases, laboratories reported 63% and therapeutic radiation centers did 68%, respectively. The MCR incidence data report is finalized 15 months after the end of the calendar year.

Out-of-State Data: Through data exchange agreements with neighboring state registries including Delaware, Pennsylvania, Virginia, West Virginia and the District of Columbia (D.C.), the MCR receives information on Maryland residents diagnosed or treated for cancer in these jurisdictions annually. In 1998, the MCR initiated data exchange agreements with six additional states: Florida, New York, New Jersey, North Carolina, South Carolina and Georgia.

Cancer Mortality Data: The MCR began matching MCR data with death certificates in 1992. The Vital Statistics Divisions of Maryland and D.C. provided death data of Maryland residents who died in Maryland and the District of Columbia. Vital status of MCR cases were updated with information from death certificates. Cancer deaths which are not in the database are followed-up by using hospital, nursing home and postmortem reports. The MCR also entered an agreement with nine mid-Atlantic states' vital statistics divisions to exchange death certificate data via an electronic bulletin board. Currently, only Virginia, West Virginia, DC, Maryland and Pennsylvania have been able to exchange data annually through this process. To improve completeness and timeliness of reporting, frequency of data exchange must be increased.

Utility of the MCR Data: The MCR is an essential part of the operation and funding of the State's cancer prevention and control program as it allows the State to:

1. Assess the magnitude of the cancer burden in the State by:
 - enabling State officials and cancer control experts to assemble the statewide Cancer Control Plan;
 - allowing State, regional and local agencies to assess fiscal planning for health care needs related to cancer;
 - providing cancer data to help public health officers target specific cancer control efforts; and
 - identifying the population groups, counties or regions with excessive rates for specific types of cancer.
2. Provide data to monitor cancer trends and evaluate programs by:
 - detecting patterns of change in cancer incidence, risk factors and stage at diagnosis over a time period;
 - evaluating the effectiveness of cancer prevention and control programs; and
 - investigating reports of cancer clusters.
3. Coordinate research and funding opportunities by:
 - collaborating with researchers and health practitioners throughout Maryland to conduct cancer studies;
 - assisting with funding with coordinated proposals to federal agencies; and
 - enabling researchers to study cancer-related problems in the most cost effective manner.

Appendix 6

EXECUTIVE ORDER 01.01.1999.17 Conquering Cancer in Maryland

WHEREAS, The State of Maryland is a signatory party to the Master Tobacco Settlement reached in litigation filed by multiple states against the tobacco industry to recover Medicaid costs associated with smoking;

WHEREAS, As a signatory party to the Tobacco Settlement, Maryland will receive funds to enable it to make extraordinary strides in education, health and agriculture, which will transform Maryland into an anti-cancer State; and

WHEREAS, It is essential to the achievement of our goals that we assemble the leading minds, practitioners and concerned community activists to plan for the most effective distribution of Tobacco Settlement monies targeted for programs to end smoking and conquer cancer in Maryland.

NOW, THEREFORE, I, PARRIS N. GLENDENING, GOVERNOR OF THE STATE OF MARYLAND, BY VIRTUE OF THE AUTHORITY VESTED IN ME BY THE CONSTITUTION AND THE LAWS OF MARYLAND, HEREBY PROCLAIM THE FOLLOWING EXECUTIVE ORDER, EFFECTIVE IMMEDIATELY:

A. Establishment. Three Task Forces are established to oversee the distribution of funding from the Tobacco Settlement for smoking cessation, health and agricultural initiatives.

They are:

- (1) The Task Force to End Smoking in Maryland;
- (2) The Task Force to Conquer Cancer in Maryland; and,
- (3) The Task Force on Tobacco Crop Conversion in Maryland.

B. Membership, Duties and Staffing. The Task Forces shall be structured, directed and supported in the following manner:

- (1) Task Force to End Smoking in Maryland.

(a) Composition. The Task Force shall be comprised of up to 21 members appointed by the Governor, including:

- i. Two members of the Senate nominated by the President of the Senate;
- ii. Two members of the House of Delegates nominated by the Speaker of the House of the Delegates; and
- iii. Up to 17 members with interest or expertise in this area, including

- but not limited to representatives of State government, public or private education and health agencies, organizations that advocate for smoking cessation and for the interests of children, the health care industry, businesses, parents, students and the community.
- iv. The Governor shall designate a Chair and a Vice Chair from among the members of the Task Force.

- (b) Duties. The Task Force shall plan for the implementation of a substantial and aggressive program to dramatically reduce tobacco consumption in Maryland, modeled after the comprehensive anti-smoking program recommended by the Centers for Disease Control. The plan would place special emphasis on programs and initiatives to reach youths, as well as minority communities that experience a disproportionately high incidence of health problems associated with tobacco consumption.
- (c) Staffing. The Department of Health and Mental Hygiene shall provide staff support to the Task Force.

(2) Task Force to Conquer Cancer in Maryland.

- (a) Composition. The Task Force shall be comprised of up to 21 members appointed by the Governor, including:
- i. Two members of the Senate nominated by the President of the Senate;
 - ii. Two members of the House of Delegates nominated by the Speaker of the House of the Delegates; and
 - iii. Up to 17 members with interest or expertise in this area, including but not limited to representatives of State government, public or private medical research institutions, the health care and the health insurance industry, patient advocacy and disease specialty organizations, businesses and the community.
 - iv. The Governor shall designate a Chair and a Vice Chair from among the members of the Task Force.
- (b) Duties. The Task Force shall make recommendations for allocation of funding from the Tobacco Settlement to achieve the goal of making Maryland the premier place in the Nation for cancer prevention, education, research and treatment. The recommendations of the Task Force shall reflect the need to improve access to, and parity of health care for minority communities and individuals who live in rural areas of the State.
- (c) Staffing. The Department of Health and Mental Hygiene shall provide staff support to the Task Force.

(3) Task Force on Tobacco Crop Conversion in Maryland.

- (a) Composition. The Task Force shall be comprised of up to 13 members appointed by the Governor, including:

- i. Two members of the Senate nominated by the President of the Senate;
- ii. Two members of the House of Delegates nominated by the Speaker of the House of the Delegates; and
- iii. Up to 9 members with interest or expertise in this area, including but not limited to representatives of State government, agricultural and environmental organizations, farm credit institutions, regional or local development groups, businesses and the community.
- iv. The Governor shall designate a Chair and a Vice Chair from among the members of the Task Force.

(b) Duties. The Task Force shall plan for the implementation of recommendations for the conversion of tobacco to non-tobacco crops, while preserving the rural-agricultural nature of the region and maintaining the economic viability of the community.

(c) Staffing. The Maryland Department of Agriculture shall provide staff support to the Task Force.

(4) Task Force members shall serve at the pleasure of the Governor.

(5) Task Force members may not receive any compensation for their services, but may receive reimbursement for reasonable expenses incurred in the performance of their duties in accordance with the State Standard Travel Regulations and as provided in the State budget.

C. Reports. The Task Forces shall provide recommendations to the Governor on or before October 31, 1999. Thereafter, the Governor may choose to delegate continuing duties to the Task Forces in the implementation of approved action plans.

GIVEN Under My Hand and the Great Seal of the State of Maryland, in the City of Annapolis, this 3rd Day of June, 1999.

Parris N. Glendening
Governor

ATTEST:

John T. Willis
Secretary of State

Appendix 7

Comprehensive Plan To Conquer Cancer in Maryland

Governor's Task Force to Conquer Cancer Presentation Summary

October 6, 1999

Sanford A. Stass, M.D.
Professor, Pathology and Medicine
Director, Greenebaum Cancer Center
University of Maryland

Introduction

Cancer in Maryland presents a paradox. Maryland is one of the most affluent states in the nation, served by two superb academic medical centers, the home of both the National Institutes of Health and the National Cancer Institute and has a reputation for progressive state policies to encourage the delivery of quality health care. Yet, at the same time, Maryland ranks sixth highest in the nation in the incidence and mortality of cancer. In 1996, 23,650 Marylanders learned they had cancer and almost 200 per week died from cancer.

Governor Glendening has articulated a vision to utilize the Tobacco Restitution Fund to conquer cancer in Maryland. Furthermore, Governor Glendening has proposed that the University of Maryland Medical System ("UMMS"), in partnership with the University of Maryland, Baltimore professional schools ("UMB"), be appropriated up to \$15 million per year for the next ten years to develop and lead aggressive initiatives to combat cancer. Governor Glendening formed the Governor's Task Force to Conquer Cancer to ensure that all interested parties would have the opportunity to provide input and review the proposed plans of the University of Maryland and Johns Hopkins University.

The University of Maryland Medical System and the University of Maryland, Baltimore, are pleased to submit the following summary of our October 6, 1999 presentation (attached) to the Governor's Task Force to Conquer Cancer.

Overview of UMMS and UMB

UMMS consists of four major divisions. The University of Maryland Medical Center ("UMMC") includes the Greenebaum Cancer Center, the Shock Trauma Center and University Hospital. The other three divisions are Deaton Hospital, Kernan Hospital and Maryland General Health Systems. These divisions, along with other related programs and services, constitute the UMMS regional delivery system that is focused on providing high quality care and superior service with convenient access for our patients and families.

UMB includes the professional schools of Medicine, Dentistry, Law, Nursing, Pharmacy and Social Work. As the State's resource for graduate education, UMB is dedicated to educating and training health care professionals, as well as others, and fostering excellence in research that will result in scientific breakthroughs with a particular emphasis on the translation of research to practical applications. Collectively, we receive over \$21 million in grant support for cancer. Our patient care programs utilize a multidisciplinary approach involving the specialties of medical oncology, radiation oncology and surgical oncology as well as many supportive services.

Finally, the UMB campus also includes the University of Maryland Biotechnology Institute's Institute of Human Virology and the Baltimore Veterans Affairs Medical Center. Collectively, all of these institutions constitute a truly unique setting for developing and expanding cancer screening, early detection, treatment, education and research programs.

The University of Maryland Comprehensive Plan

Our comprehensive plan is organized and can be explained by answering the following key questions:

- What will our goals and guiding principles be?
- What cancers will we target and why?
- What are the key challenges for these targeted cancers and what strategies will we develop over the next ten years to address the challenges?
- How will the University of Maryland organize its plan to conquer cancer?
- What are our planned investments in year one?
- How will we measure success?
- How will partnerships and collaborations be featured?

What Will Our Goals and Guiding Principles Be?

The goals of our plan are as follows:

- Address the challenges related to the targeted cancers over the next ten years by developing and implementing new and innovative strategies.
- Using culturally sensitive approaches, focusing on minority, rural and underserved populations.
- Significantly impact the incidence, morbidity and mortality of the targeted cancers in Maryland.

Additionally, these goals will be accomplished by following guiding principles intended to increase our effectiveness and maximize efficiency. The guiding principles are as follows:

- Given the plan's focus on minority, rural and underserved populations, culturally sensitive prevention and control approaches will be developed and utilized at all times.
- The plan will emphasize partnership with existing programs and services currently offered in the community by other organizations. In addition new partnerships will be encouraged and developed at all levels.

What Cancers Will We Target and Why?

We are committed to expanding our comprehensive cancer program to serve patients with all forms of cancer. However, recognizing that focus is critical to having meaningful impact, we will target the following six cancers:

- Breast
- Aerodigestive
- Oral/Head and Neck
- Cervical.
- Prostate
- Lung/Esophageal
- Colorectal, and

We will focus on these particular cancers because they are very common in Maryland, many are tobacco related and all have a disproportionate impact on minority, rural and underserved populations.

What are the Key Challenges for These Targeted Cancers and What Strategies Will We Develop Over the Next Ten Years to Address the Challenges?

In order to provide a framework for developing specific strategies, we have categorized the key issues into eight challenges. We have developed specific strategies to address each challenge in order to have a meaningful impact. The challenges and representative strategies are as follows:

1 – Expand education opportunities for the public and their health care providers.

Strategies include augmenting cancer curriculum for our healthcare students and utilizing existing relationships and affiliates. We will develop more effective public education programs, continuing medical education programs and further develop our telemedicine network.

2 – Augment prevention measures and develop effective programs to modify negative life-style behavior.

Strategies include linking with the State tobacco cessation initiatives and increasing chemoprevention trials in high risk populations utilizing culturally sensitive approaches to increase effectiveness.

3 – Expand/coordinate screening, early/detection and follow-up care.

Strategies include expanding existing UMB programs, leveraging our emergency department network affiliates and expanding the use of mobile screening units. We will emphasize follow-up care using culturally sensitive approaches.

4 – Improve access to cancer care services.

Strategies include expanding our telemedicine network beyond our two current sites, coordinating access with our network affiliates and state, regional and local partners. We will develop standards, working with our partners, for “best practice” cancer care that will be shared with our partners.

5 – Increase enrollment in cutting-edge clinical trials.

Strategies include utilizing our state-wide cancer network to expand access to both information about trials and to the trials themselves. Also, we will expand our investigations of barriers that limit access to trials.

6 – Enhance access to innovative cancer programs in the academic centers.

Strategies include expanding our telemedicine linkages for rapid consultations, tumor board access and continuing education programs for healthcare professionals.

7 – Expand access to the most advance supportive care measures.

Strategies include expanding hospice care, education, pain management and other supportive care. In addition, we will expand psychosocial programs with School of Social Work, the American Cancer Society and community organizations.

8 - Expand innovative translational research and clinical programs in cancer causation, detection, prevention and treatment.

Strategies related to this challenge are described below as part of planned expansion of the Greenebaum Cancer Center and the Program in Oncology and are addressed in the planned investments section on page 60.

How Will the University of Maryland Organize its Plan to Conquer Cancer?

The University of Maryland will develop and implement the strategies needed to address the challenges over the next ten years by organizing our existing resources and planned investments into three major areas: expanding patient care and research programs, establishing a state-wide cancer network and developing new programs and expanding existing programs that serve neighborhoods in West Baltimore.

Expanding the Greenebaum Cancer Center and the School of Medicine's Program in Oncology and other UMB cancer activities will leverage the existing organized and synergistic research programs and related clinical programs that are already in place to focus on the targeted cancers as well as other forms of cancer. These formal programs are Breast Cancer, Prostate Cancer, Aerodigestive Cancers (which include Lung/Esophageal, Oral/Head, Neck and Colorectal), Cancer Prevention and Control, Experimental Therapeutics, Molecular Biology and Genetics, and Viral Carcinogenesis. The expansion will focus on accelerating the existing translational research process and expanding the scope of our research and clinical program activities to benefit patients (see our planned investments on page 6).

We will build on strong relationships throughout the state to develop a state-wide cancer network, which is the infrastructure that will regionally and locally support a wide range of culturally sensitive cancer education, outreach and research activities. The network will provide coordination and integration support among all providers, including local providers such as community physicians, the American Cancer Society, the Area Health Education Centers, county health departments and regional hospital partners. Our first phase will focus on West Baltimore, Western Maryland and Eastern Shore. Later phases will include Southern Maryland, Montgomery and Prince George's counties.

Given that we currently serve West Baltimore and have major programs and services already in place, the initial focus in West Baltimore will be to build on these existing programs and services. For example, we operate primary care centers in the local neighborhoods and on the UMMC and Maryland General campuses. Specific initiatives will be developed to increase education, prevention, screening and appropriate follow-up activities through these centers to address the specific cancer challenges in West Baltimore.

What Are Our Planned Investments in Year One?

Our planned investments directly related to the Greenebaum Cancer Center and Program in Oncology expansion will be in clinical care, research and facilities. These investments are as follows:

The clinical care investments will include program expansions by increasing physician capacity in selected subspecialties, increasing other health professional and support staffs and expanding supportive care. In addition, we will expand our clinical innovations in stem cell/bone marrow transplantation, new drug approaches, gene therapy, immunotherapy and chemoprevention studies. In year one, we will invest \$4 million, or 27% of our proposed funding, on these activities.

The research investments will include expanding rapid translational approaches such as new biomarkers for early detection and staging, biochemical studies for cancer cells, cancer vaccines, anti-angiogenesis approaches to therapy, viral carcinogenesis, drug design and mechanisms of drug resistance. In addition, we will expand our prevention and control program, with a particular emphasis on prevention, surveillance and outcomes. In year one, we will invest \$4.0 million, or 27% of our proposed funding, on these activities.

The facility investments will include the renovation of critical research laboratories and the renovation and expansion of essential clinical facilities. In year one, we will invest \$3.0 million, or 20% of our proposed funding, on these activities.

The network investments will include expanding the telemedicine linkages, increasing access and participation in clinical trials, expanding outreach and support for early detection and follow-up, expanding education programs for public and healthcare professionals, expanding prevention initiatives, including linking with smoking cessation initiatives, and developing the necessary infrastructure to support all activities. In year one, we will invest \$4.0 million, or 27% of our proposed funding, on these activities.

How Will We Measure Success?

Cancer is a highly complex disease with a multitude of factors contributing to the incidence and mortality rates. To ultimately affect these rates, it is critical to focus on intermediate measures to ensure that progress is being made. Intermediate measures that will be developed include specific increases in screening rates in targeted populations, increasing the number of patients diagnosed with cancer at early stages, increasing the number of patients enrolled in clinical trials and increasing the number of telemedicine linkages throughout the state.

How Will Partnerships and Collaborations be Featured?

Partnership and collaboration will be critical to our success. Already, UMB and UMMS have major partnerships and collaborations in place focused on cancer. Attached as Exhibit A are selected examples. We will expand these partnerships and collaborations even further. In addition, we have historically worked with community-based organizations throughout the state. Again, we will expand these relationships further and establish new relationships as part of our plan.

Finally, we have a long-standing collaborative relationship with Johns Hopkins University. We are committed to expanding our collaborative efforts as part of our plan. Already, we have agreed with Johns Hopkins University to develop joint prevention and control programs initially focused in Baltimore. We will meet frequently to facilitate communication and ensure coordination. We will also co-sponsor a national conference to present results in cancer research and results and to develop joint research proposals in high priority areas.

Conclusion

Our plan will address the key challenges of cancer over the next ten years in a comprehensive way and in a collaborative manner with measurable results. With Tobacco Restitution Fund support, we believe that, in accordance with Governor Glendening's vision, we will be a major force in helping Maryland be on the winning side of the battle against cancer.

EXHIBIT A

Cancer Collaborations At The University of Maryland, Baltimore

School of Dentistry

- Oral School of Dentistry
- Oral and Head and Neck Cancer
- Prostate Cancer
- Cancer Prevention and Control

School of Nursing

- Cancer Prevention and Control
- Breast Cancer

School of Pharmacy

- Development of effective drug delivery systems
- Lung targeted anti-cancer drugs
- Optimization of drug administration to the lung
- Oncogenes and tumor suppressor genes

School of Social Work: Community Outreach

- Cancer Prevention and Control
- Life-style modification

School of Law

- Health policy and ethical issues

Appendix 8

Johns Hopkins University

Cancer Prevention and Control: Continuing the Initiative

Task Force to Conquer Cancer in Maryland
October 1999

JOHNS HOPKINS UNIVERSITY PROPOSAL

Task Force to Conquer Cancer in Maryland

Background

In the next few years, cancer will emerge as the leading cause of death in the United States. Indeed, for perhaps the first time in this country, cancer has become the leading cause of death in the African-American male population in Baltimore City. For the past 50 years, Maryland has been annually ranked among the six worst states in terms of cancer mortality and this rate exceeds that of the lowest state, Utah, by over 50%. Taken together, these data compel us to develop a comprehensive strategy for eliminating this disease that impacts virtually every family in Maryland.

The Johns Hopkins Cancer Center was designated by the National Cancer Institute (NCI) as one of this country's first Comprehensive Cancer Centers in 1973. Since that time, the underlying molecular mechanisms of cancer have been elucidated at a very rapid rate and these findings are now being applied for earlier and more effective prevention, diagnosis, and treatment. Within recent years, there have been continued gains in the systemic treatment of many cancers including breast, colon, prostate, and lung cancer, the introduction of new biologic treatments for a number of malignancies, identification of persons at high risk for developing cancer using molecular techniques, and the first demonstration of "proof of principle" that chemoprevention can decrease the incidence of a common neoplasm (breast cancer) in people at high risk. It is also evident that we still have significant gaps in our fundamental understanding of the biology of cancer and a great need for enhanced mechanisms of translating biologic discoveries from the laboratory into the clinic. Furthermore, it is imperative that the barriers of access to care and access to advances in research for minority and underserved populations are eliminated.

Johns Hopkins Comprehensive Cancer Center

Today, Johns Hopkins is the only NCI-designated Comprehensive Cancer Center in the State of Maryland. Since the beginning of the National Cancer Program in the early 1970's, the Johns Hopkins Cancer Center has been recognized as one of the "Centers of Excellence" in cancer care. The Cancer Center faculty is a multidisciplinary, institution-wide team that consists of approximately 200 physicians, scientists, and health care deliverers from over 24 departments at Johns Hopkins including the Schools of Medicine, Public Health, and Nursing. Within the next several months, most of the activities of the Cancer Center will be relocated in two state-of-the-art facilities. They are The Bunting-Blaustein Cancer Research Building and The Harry and Jeanette Weinberg Building which will house the Johns Hopkins Comprehensive Cancer Center including medical, surgical, and radiation oncology, pathology, radiology, and a variety of other support services. The relationship between clinical care and research is an integral part of the Johns Hopkins approach to cancer treatment, providing patients access to the most advanced care available through translational research that moves new findings from the bench to the bedside.

For the past several years, the Johns Hopkins University has been the leader in cancer research funding from the National Institutes of Health, the American Cancer Society, and other cancer research foundations. It is important to note that a significant amount of this research funding has gone into highly competitive and

specialized grants such as SPORE (Specialized Programs of Research Excellence) grants which are focused on applying the latest in research to the elimination of major cancers. The Johns Hopkins Cancer Center is the only cancer center in the country to have three such SPORE grants - prostate cancer, lung cancer, and gastrointestinal malignancies. The Cancer Center also has major patient care and research programs in breast cancer, hematologic malignancies, brain tumors, as well as distinguished programs in specific therapeutic areas such as bone marrow transplantation, new drug development, and biologic therapies. While these research grants have allowed Johns Hopkins to develop the critical mass needed to expand cancer research and care, these funds are restricted in their use and do not allow the flexibility to address Maryland's specific problems.

It is clear that in order to make gains against cancer in the State of Maryland, advances in research and patient care must be achieved in full partnership with the community. A major program in the Johns Hopkins Comprehensive Cancer Center is our community program which encompasses a wide range of prevention, early detection, treatment, and supportive care programs throughout the State of Maryland. The Johns Hopkins Cancer Center is also one of eight cancer centers in the United States selected by the National Cancer Institute to develop a genetic network in its own geographical region.

The Mid-Atlantic Genetic Network has been established by the Johns Hopkins Cancer Center and provides infrastructure and resources for a wide range of health care organizations throughout the region to participate in applying the benefits of the latest advances in cancer genetics to their own communities. There are approximately thirty community organizations, hospitals, and academic institutions in Maryland and some of the surrounding States that are participating in this effort. In addition, the range of community initiatives of the Johns Hopkins Cancer Center includes programs with:

- Historic East Baltimore Community Action Coalition (HEBCAC)
- Clergy United Renewal in East Baltimore (CURE)
- Urban Medical Institute in West Baltimore
- Morgan State University
- Howard University
- University of Maryland
- State & Local Health Departments (Training Center for Public Health Research)
- Suburban Hospital in the Washington suburbs
- Upper Chesapeake Health System in the northeast part of the State
- Kent and Queen Anne's Hospital on the eastern shore
- Laborers International Union of North America

Collaboration and a collegial relationship have existed between the Johns Hopkins University and the University of Maryland for many years, especially in the area of cancer research. The goal to conquer cancer in Maryland offers additional opportunities and willingness to expand the relationship of these academic medical centers. Planned collaborative efforts include the development of joint prevention and control programs initially focused in Baltimore, quarterly meetings between the leadership of each institution to facilitate communication and coordination, co-sponsorship of a national conference to present results in cancer research and treatment supported by State tobacco restitution funds, and the development of joint cancer research proposals in high priority program areas.

John Hopkins' Proposal

The Johns Hopkins University is uniquely positioned to play a major role in reducing the incidence, mortality and morbidity from cancer due to our clinical, basic, and translational science as well as the extensive and highly successful networking programs with communities in Baltimore and throughout the State. It is important to note that the programs required to impact cancer are inherently highly collaborative and multidisciplinary, and require new and enhanced partnerships within our own departments, other academic institutions, State and federal governments, industry, and community organizations.

Cancer is a precise outcome of multiple interactions between one's genes and environment integrated over the course of many years. While many of the genes associated with cancer are being characterized at a rapid rate, the environmental component including diet, pollution, and industrial waste, is still poorly understood. A major exception is tobacco smoking and lung cancer where the carcinogens in tobacco smoke are such powerful agents that the causal relation could be identified. As we begin to translate the molecular genetic knowledge to population based studies, both gene and environment must be assessed and described in a systematic manner.

The goal over the next ten years is to comprehensively understand the factors that contribute to Maryland's high rate of cancer and develop clinical and prevention strategies that will reduce the incidence, morbidity, and mortality of cancer across the State. We believe cancer care is a continuum that includes research, education, economic development and community outreach. Each of these is incorporated in our plan that emphasizes surveillance, prevention, and early diagnosis.

The collaborative anti-cancer efforts at Johns Hopkins can be described in three areas: (1) Surveillance, (2) Prevention, and (3) New and Innovative Therapies.

1. Surveillance

- Characterize and track sources of exposure and cancer statistics.
Develop a comprehensive list of the sources of exposure of Maryland residents to cancer causing and promoting agents and mixtures. The data on sources of exposure must be developed with a regional and population based approach and would include hazardous waste sites, tobacco use, stationary source pollution exposures from industry, general airborne/waterborne/foodborne/soil pollutants, and a survey of old industrial sites in both urban and agricultural areas.

Assemble the ongoing data from the Maryland Cancer Registry into a useful database by cancer site and diagnosis that is then transferred into a geographic data set for mapping and identifying areas of high cancer incidence. The data is critical for many of the molecular epidemiology components, including the identification of regions of high cancer incidence and inadequate access to care and treatment. This plan will be developed by virtue of existing programs with the community and new collaborations with Morgan State University and Howard University. This information can be used to develop the most strategic sites for cancer care delivery, educational programs and recruitment into specific clinical trials; and in collaboration with the Mid-Atlantic Cancer Genetics Network to coordinate studies and identify both high-risk families and environmental clusters. This plan recognizes the importance of understanding the magnitude and distribution of cancer; the genetic, molecular, and other epidemiologic approaches to understanding its cause and

distribution in the population, and the critical importance of understanding behavior determinants for reducing cancer in Maryland.

- Develop and measure markers of exposure.

Utilizing sophisticated biochemical and molecular techniques, investigators at Johns Hopkins can identify specific biomarkers of exposures to carcinogens and of early evidence of cancer well in advance of the detection of cancer by conventional techniques. In order to apply these new techniques to various populations in Maryland, a multidisciplinary team of scientists, clinicians, and community leaders must be organized. Essential to this effort is the participation of genetic epidemiologists who have the experience and talent to unravel the mysteries of Maryland's uniquely high rates of cancer and to plan a wide range of interventions to reduce these rates. An example of such a challenge is understanding the basis for the extraordinarily high incidence and death rate in the African-American population in Baltimore City.

2. Prevention

- Primary Prevention

Primary prevention is health promotion and risk reduction following the identification of cancer causative agents. The goal is to lower the risk for the development of cancer by a change in lifestyle behavior or reduction of exposure to etiologic risk factors. An example of primary prevention is Tamoxifen, a hormonal agent that binds to specific cellular receptors and blocks the development of cancer changes in individual breast cells. Tamoxifen has been successfully used to prevent breast cancer in a population of high-risk women. However, despite this early success, new approaches must be developed to produce even safer and more effective prevention agents. Even with an effective chemopreventive agent, the behavioral science experts in partnership with the community must devise strategies to encourage women of all socioeconomic classes to participate in prevention programs (before a cancer diagnosis has been made), and to sustain their participation for prolonged periods of time.

- Secondary Prevention

To reduce the overall cancer burden, a primary prevention process should be used, but this is not always feasible. Given the significant relationship between survival and staging at the time of diagnosis, the importance of screening and early detection programs is paramount. Clearly, the development of mammography and PAP tests as accepted practices for screening for breast and cervical cancers have significantly contributed to five-year survival rates of greater than 90% when disease is diagnosed at a localized stage. However, despite the availability of these types of preventive services, certain populations of women do not have access or choose not to participate in cancer screening programs. Once again, behavioral science must merge with state-of-the-art technology to develop messages and methods that promote greater adherence to screening guidelines and access to new methods of detecting cancer at an earlier stage.

- Tertiary Prevention (Cancer Control)

Once a cancer diagnosis is made, treatments are initiated to reduce the potential for clinical complications, to stimulate physical and psychological rehabilitation, and to minimize disability. Given the probability for adverse reaction to treatment and complications of

cancer itself, management of symptoms such as fatigue, nausea, and pain must be effectively addressed and resolved in order to promote quality of life and a return to normalcy as early as possible. In many respects, palliative care can play a far more significant role in cancer therapies, and not limit itself to the care of the terminally ill.

3. New and Innovative Therapies

- **Developmental Cancer Therapeutics.**

The explosion in understanding of the genetic and molecular basis of cancer provides an ever increasing number of tumor-specific targets to attack with chemotherapy. Furthermore, there are exciting opportunities for rationally designed multimodality strategies that exploit synergistic activities between new biologic therapies such as immunotherapy and chemotherapy. The Johns Hopkins Cancer Center thus has committed to making a renewed investment in developmental therapeutics that leverages the strengths of both our cancer biology/genetics laboratory research programs and the clinical research activities throughout the State.

Measures of Success

The initiatives described as part of the Johns Hopkins University's proposal will certainly focus on the most common malignancies afflicting people in the State of Maryland; i.e., lung and other aerodigestive malignancies (including oral cancers), breast cancer, prostate cancer, and colorectal cancer. In order to assess the effectiveness of these initiatives, Johns Hopkins will utilize the measures described in the Healthy People 2010 regarding cancer incidence, morbidity, and mortality rates such as the reductions of breast cancer and lung cancer deaths by 7% and 14% respectively. In addition, the clinical investigators at Johns Hopkins will work with investigators in health services research at the Johns Hopkins School of Public Health to develop intermediate end points that will enable us to ensure that we are on the right track toward the 2010 goals. For example, for Years 1-5 measures will include percentages of the populations screened for common cancers and accessibility of underserved populations to preventive interventions.

Building the Infrastructure

As noted above, Johns Hopkins' proposal is a continuum that includes research, education, economic development and community outreach. While many would like to see funding targets for areas such as research or treatment, it is difficult to identify funding for these mutually exclusive areas when each program will incorporate research, education, prevention, and treatment. For example, the current Prostate Cancer Program includes molecular research to develop markers to detect cancer at any earlier, more treatable stage as well as interventions based on the biology of prostate cancer to prevent the disease. Developing these markers includes other program components such as working with the communities to provide screening, treatment, and education, especially among African-American and Hispanic communities. While some would perceive the Prostate Cancer Program as research since it is attempting to identify those individuals at the highest risk for this type of cancer, the reality is that this program will simultaneously provide screening, education, and treatment opportunities.

Based on the Governor's commitment of \$15 million annually to Johns Hopkins for the next ten years, we have developed a funding plan that will target the resources needed to conquer cancer. These resources are Facilities and Technology; Multidisciplinary Cancer Team; and Seed Money for Innovative Programs.

The first three years of the proposal targets the majority of funding to Facilities and Technology. The funding will support the construction of critical research laboratory buildings for both the School of Medicine and the School of Public Health. In the out-years, funding for Facilities and Technology will support the renovation of existing laboratories and the development of Informatics. In the area of Recruit and Retain Talent, Johns Hopkins identified the need to develop and enhance the multidisciplinary cancer team, which includes behavioral scientists, clinicians with expertise in prevention methodologies, genetic and molecular epidemiologists, neighborhood health workers, and other health professionals. Finally, funding for innovative programs will assist Johns Hopkins' translational research that moves new knowledge from the laboratory to the bedside.

While allocating the proposed funding to the areas of research, education, prevention, and treatment is very difficult and depends on the definitions of the categories, Johns Hopkins identified the funds targeted for facilities and technology as research. Based on the proposed timeline, Research and Core Facilities account for \$63 million or 42% of the total over the ten-year life span of the program. The remaining funds were allocated to education (24%), prevention (24%), and treatment (10%).

Economic- Impact

The Johns Hopkins proposal, while focused on research and teaching activities to improve patient care, will also have a tremendous economic impact. This investment by the State of Maryland in research will increase jobs in a wide range of areas in health care and fundamental research. These funds will also permit the retention of outstanding young investigators, trained at our institution who now go forth across the country developing renowned laboratories. This "brain-drain" can be reversed to provide many of these individuals competitive opportunities to develop outstanding programs in Maryland. Past history clearly indicates that these funds will be dramatically leveraged by subsequent successful grant submissions to Federal and private agencies. These funds will also play an important role in enhancing the position of the State of Maryland as a center for biotechnology development. Once again, past history has shown that funding of this type will not only support productive interactions with industry, but will continue to stimulate the formation of new companies by Johns Hopkins researchers.

Conclusion

There are unprecedented opportunities for Johns Hopkins University to make major advances in health care delivery and cancer research that will greatly impact the health of the citizens of Maryland. The areas of surveillance, prevention, and new and innovative therapies represent broad opportunities which cross departments and schools at Johns Hopkins and also provide opportunities for partnership with the community, other medical institutions, and industry. The ultimate goal is to reduce cancer incidence, morbidity, and mortality in Maryland. In order to accomplish this, it is clear that considerable resources must be dedicated to this effort. Johns Hopkins has a proven record in combating cancer for the past 25 years and the opportunities resulting from the tobacco settlement provide even greater potential to conquer cancer in Maryland.

Appendix 9

October 21, 1999

Donna Jacobs
Chair
Georges Benjamin, M.D.
Vice Chair
Governor's Task Force to Conquer Cancer

Dear Ms. Jacobs and Dr. Benjamin:

The University of Maryland and Johns Hopkins University are committed to working cooperatively in the effort to reduce the incidence, morbidity and mortality of cancer in Maryland. We have a long history of collaboration related to cancer research, clinical care and education that has benefitted Marylanders. We believe that the Tobacco Restitution Fund creates an extraordinary opportunity for us to expand our collaborations in a very positive and complementary way.

More specifically, we are intent on expanding existing collaborations in the basic sciences and clinical areas. We will develop additional joint clinical and research cancer proposals particularly related to issues at the community level. Furthermore, we have agreed to co-sponsor an annual national conference to present our results in cancer research and treatment supported by Tobacco Restitution Funds.

We have already instituted leadership meetings between the two institutions to discuss our plans. Most recently, we have agreed to increase the frequency of these meetings to ensure and implement that our activities are well coordinated as we go forward.

We appreciate the opportunity to participate in the Task Force process. We realize that we have a unique opportunity to address the challenges of cancer in Maryland. As the State's two academic medical centers, we accept our special role and responsibility to work together to help Maryland be a recognized leader in winning the battle against cancer.

Sincerely,

Sanford A. Stass, M.D.
Professor, Pathology and Medicine
Director, Greenebaum Cancer Center
University of Maryland

Martin D. Abeloff, M.D.
Eli Kennerly, Jr. Professor of
Oncology and Medicine
Director,
Johns Hopkins Oncology Center

Appendix 10

The Johns Hopkins University Proposal

	<i>Dollars Dedicated*</i>	<i>Percent of Proposal</i>
Prevention/Early		
Detection	\$36	24%
Education	\$36	24%
Treatment/		
Supportive Care	\$15	10%
Research	\$33	22%
Capital	\$30	20%
Total	\$150	100%

**These numbers reflect ten (10) year totals*

University of Maryland Medical Systems Proposal

	<i>Dollars Dedicated</i>	<i>*Percent of Proposal</i>
Prevention/Early		
Detection	\$20	13.0%
Education	\$52	35.0%
Treatment/		
Supportive Care	\$15	10.0%
Research	\$57	38.0%
Capital	\$6	4.0%
Total	\$150	100%

**These numbers reflect ten (10) year totals*

Recommend Allocation of Anti-Cancer Funds**

	<i>Non-University Percentage Allocation</i>	<i>One Year Allocations</i>
Prevention/ Early		
Detection	25%	\$5.0 M
Education	20%	\$4.0 M
Treatment/		
Supportive Care	20%	\$4.0 M
Research	20%	\$4.0 M
Surveillance/		
Evaluation	10%	\$2.0 M
Administration	5%	\$1.0 M
Total	100%	\$20 M

*** These figures reflect allocations of the \$20M.*